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The Journal of the
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Asymmetry in Disease

The Psychoneuroses • Syphilis

Parasitology in the U. S. S. R.

The Pennsylvania Hospital

Editorials Medical Book News

Contemporary Progress

Vol. 73 No. 1

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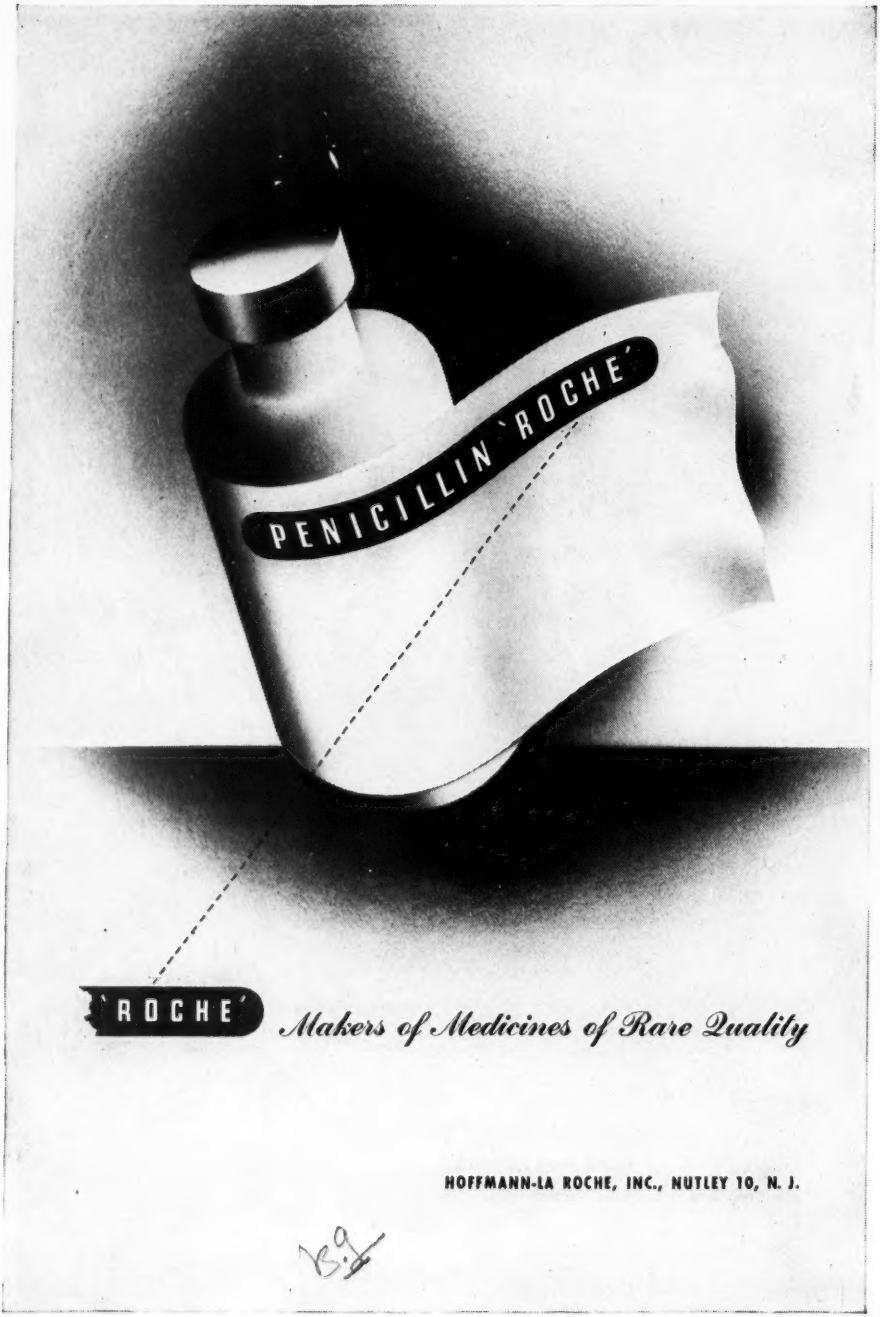
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EDITORIALS

The New Drug Era

UNTIL Jacob Bigelow wrote his remarkable essay on "Self-limited Disease" (1835), diseases were over-treated with drugs. In fact, they continued to be so treated for a long time after Bigelow's protest, so that when Osler began his clinical work at the Montreal General Hospital and his teaching at McGill University he was regarded by the rank and file of the profession as a therapeutic nihilist. He gave very little medicine—and the better results were apparent to all. This was about 1878. Again, in Philadelphia (1886), Osler paid tribute to Austin Flint, who had recently died, as a pioneer in the drugless treatment of pneumonia and many other diseases. All of which is not to say that Osler was not a good therapeutist. He used drugs rationally and scientifically, never empirically.

We have passed through a kind of quasi-nihilism—it was never thoroughgoing nihilism—and have emerged into a new era, in which drugs are coming into their own. For there is a magic in the new therapy—witness the sulfonamides and penicillin—which cannot be gainsaid, and which never characterized the old materia medica. And we are quite obviously only on the threshold of the new era.

Bigelow and Flint and Osler could not vision a time in which drug therapy would come to occupy its present and future place; however, if they were alive today they would hail the new dispensation—and only caution, wisely, against the excessive zeal which brings discredit upon the most precious of resources.

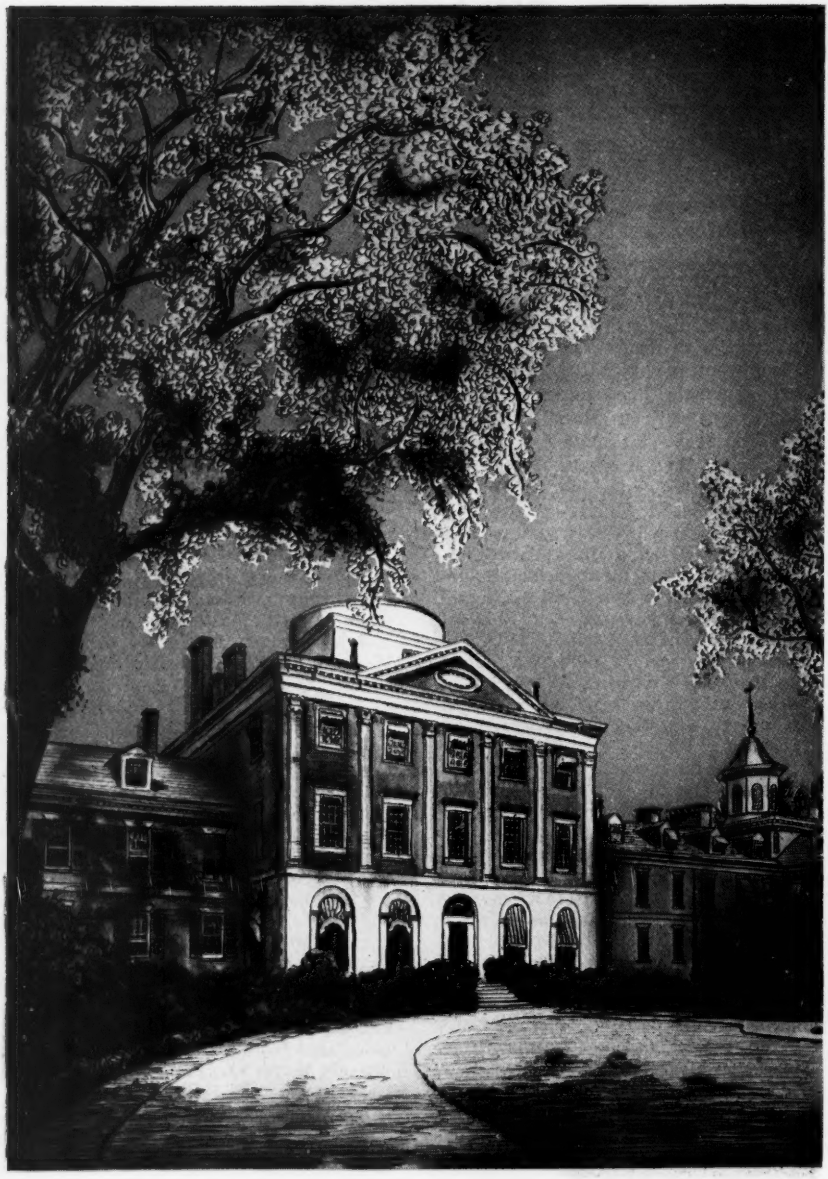
Political Syphilis

IT is interesting to note how writers and speakers dealing with contemporary themes are obliged to fall back on medical terminology to express their ideas. Thus Sigmund Neumann of the Department of Government of Wesleyan University, writing in the *New York Times* of November 26, 1944 about how the social basis of German National Socialism, or Hitlerism, must be attacked after the war, says that that social basis originated "in the frustrated middle class of inflation days, the rootless unemployed of the great depression, and the smaller though articulate group of young soldiers of fortune who did not find their way home from the battlefields of the last war and led the march right into the second World War. The aftermath of this world conflict will bring an even larger group of these crisis strata to the fore in Germany and elsewhere. Fascism is 'political syphilis,' and thus an international problem."

"Political syphilis" is an apt term. Fascism has epidemiological aspects that expose other lands to infection. The point is that our social disorders like Fascism are sicknesses very comparable to the diseases of the body. No other comparisons, even when correctly made, can be so apt. And it is to medicine that our social doctors should look for curative techniques. They will have to discover a penicillin that will cure Germany. Most of the methods proposed are calculated to feed the disease and to "lead directly to the creation of a Hitler myth."

The Subway Anoxia Problem

IN our December, 1944 issue we published an article on some medical aspects of flying by the Director General of Britain's Royal Air Force Medical Services, Air Marshal Sir Harold E. Whittingham. In the course of the article he



The Pennsylvania Hospital

South facade, completed Original Building

. . . See Cultural Medicine, on page 10

described what he called a light walk-about bottle, containing enough oxygen to last twenty minutes, sometimes used by aircrew members when their duties involve moving about the aircraft. Numerous supply points throughout the fuselage can be plugged into.

Some such system might be applicable to subway travel. It's needed, since proper ventilation is inexpedient or impossible in old-type subways.

A Dilemma

THE *New York Times*, attempting in its issue of November 26, 1944 to confute editorially a belief on the part of an influential body of British opinion that the American public "in its enthusiasm for private enterprise has failed to grasp to what extent German National Socialism has made socialism in Europe inevitable, even when unwanted," reveals an apparently fatal flaw in its own position with respect to left-wing state medicine, which it has seemed to favor.

Among other things, the aforesaid body of opinion had reflected the belief that Britain, "although still theoretically capitalist, has accumulated so many debts, lost so much trade and hypothecated so many over-seas investments during the war that nothing but controlled collective action over a long term of years can put her on her feet." Much depends, says the *Times*, on what is meant here by "controlled collective action"; but, continues the *Times*, "if it means socialism or a planned economy, it is merely begging the question. It assumes that capitalism is a sort of luxury, that it is all very well for a country already rich and prosperous, but that poor countries or countries in difficulties can be saved only by socialism or by 'national planning.' This is certainly not obvious. Only those, in fact, who are already socialists or planners for other reasons are likely to accept such an assumption."

Why, then, does the *Times* seemingly favor *that much of Fabian socialism which would set up left-wing state medicine?* Why should the *Times* take the position of the British thinkers where medicine is concerned and itself beg the question? If it takes it at this point it might as well take it at all points. Piecemeal or Fabian socialism makes for the inevitable socialism in toto whose fetid embrace the *Times*, professedly, seeks to evade.

ASYMMETRY IN DISEASE

Donald deF. Bauer, M.D.
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A NOTION, seriously entertained in the past, that one side of the body is more resistant to disease than the other, may not merit serious consideration. It might be helpful to the practitioner, however, to learn whether differences exist in the morbidity rates of the right and left members of organ pairs. The discovery of the true explanation for such differences would bring to light important information about the role of constitutional factors in pathogenesis.

Landauer (1939) found such differences (4). In fowl, "polydactyly . . . is much more frequently expressed on the left foot than on the right, or, the skull deformities, which seem to determine cross beak of chickens, occur much more frequently in such a way as to cause deviation of the upper beak toward the right side . . ." In man, both developmental defects and diseases of postnatal origin have been observed more frequently on one side. For most examples the published data are inadequate. One-sided harelip is more frequent on the left—the side which appears also to be more severely involved in bilateral cases. Aberrant renal veins occur more often on the right. Strabismus is observed involving the left eye more than the right. The cleft in myelocystocele is asymmetrically situated and usually to the left side. Moveable kidney is found usually on the right. Defective development of the long bones is more common on the right. Supernumerary nipples appear usually on the left. Lower lobe bronchiectasis is far more often on the left. Varicocele is an involvement primarily of the veins of the left spermatic cord. Acute pyelitis originating during pregnancy is

Second contribution of a series under this heading.

practically confined to the right kidney. For all these examples, thoroughly satisfactory explanations are not available. In subsequent communications it may be possible to publish adequate reviews of knowledge in the fields concerned, and to indicate areas of ignorance. Contributions of statistical data, suggestions and reviews will be most welcome.

Neuroblastoma of the Adrenal

MORE than 200 cases of adrenal neuroblastoma have been reported. The reviews of Scott, Oliver and Oliver (1933), Redman *et al.* (1938) and Kato and Wachter (1938) show clearly that there is no significant difference in the frequency of involvement of the two adrenals. For a number of years cases of this disease were divided into Pepper and Hutchinson types, on the basis of observed differences in the principal sites of metastases. In Pepper's article (1901) there was no description of a syndrome. Since the adrenal growth was on the right in only three of his six cases, there is little reason for the concept of a "Pepper type" with the right adrenal as the site of the primary growth and the liver as the chief site of metastases.

Hutchinson (1907) was more definite. Whereas Pepper had not decided whether the tumor was primary in liver or adrenal, Hutchinson's title was: "On suprarenal sarcoma in children with metastases in the skull." Features of his exposition were: (1) sarcoma of the adrenal; left side in 6 cases, right side in 4 cases, (2) most extensive metastases in the bones of the skull. "The most important point to bear in mind is that the most striking signs, and those which first advertise the case, are those which are produced by the secondary deposits in the skull." (3).

It was Frew (1910) who really subdivided neuroblastoma cases into Pepper and Hutchinson types. "My own observations have convinced me that this disease gives rise to two entirely different 'clinical syndromes,' and equally different pathological features according to which suprarenal has been the site of the primary growth." (2) Frew wrote: "The clinical features and the pathological findings in the two classes thus present a very different picture, and these differences which are so constant, would be impossible to explain, I think, on the assumption of a blood spread. But if . . . the secondary deposits are but extensions of the primary growths along the lymphatic channels, it would at one and the same time explain the constancy of the metastases in certain groups in each class, and also the difference between these groups in the two classes. The dissemination is not always in the direction of the lymph stream, but backward transport along the lymphatic channels takes place almost as readily in such cases as shown by Handley and others." Thus Frew postulated a (Hutchinson) type in which the left adrenal was the seat of primary growth, with lymphatic spread to the periaortic nodes, mesenteric nodes, mediastinal nodes, cervical nodes, ribs, sternum, skull, and the liver. A separate (Pepper) type began, in his concept, with primary growth in the right adrenal and metastases via lymphatics to the upper surface of the liver, right leaf of the diaphragm, anterior pericardium, an easily palpable knot of glands at the inner end of the right clavicle, both lungs, sometimes the cranial bones, and the right lymphatic trunk and some of its tributaries. "The explanation, I think, lies in the fact that whereas the lymphatics from the left suprarenal run to the lumbar glands, those from the right are tributaries of the right lymphatic trunk." (2)

Until recently textbooks of pathology have adhered to Frew's conception. Now, however, the accumulation of further data and the application of simple statistical concepts have demonstrated that there is no significance to that conception. Bothman and Blankstein (1942) drew attention to the orbit in adrenal neuroblastoma. Ecchymosis, they found, is an earlier and more frequent sign than exophthalmos. Frew had stated: "A point of great importance is that the cranial tumors and exophthalmos occur first on that side of the head on which the cervical glands are largest [*sic*] and in the case of left suprarenal growths this is usually on the left side." (2) Bothman and Blankstein found ecchymosis of the eyelids and exophthalmos earlier in the left side in one case with tumor of the right adrenal but in the right side in a second case of tumor of the right adrenal. (1)

Case Report: A colored girl, aged 13 months, suffered gradual swelling of the right side of the neck, beginning 3½ months before admission. In two weeks this was the size of a man's fist. Swelling of the left eye occurred first; two weeks later the right eye began to swell. Abdominal masses were palpated by an

examining physician 2 months before admission. The child had masses in the skull, marked bilateral exophthalmos, a protuberant abdomen with a firm, nodular, enlarged liver. The left adrenal was grossly and microscopically normal but the right adrenal was unrecognizable in the mass of tumor located at the upper pole of the right kidney. Metastases were found in the right kidney, liver, retroperitoneal lymph nodes, posterior orbital tissue and skull. There were pseudo-rosettes of small lymphoid-like cells with considerable size variation.

If the hypothesis of Frew were correct, the right cervical swelling (in the above case) would have indicated involvement of the right adrenal (the one found to be affected) and exophthalmos would have appeared first on the right instead of on the left. The difference in lymphatic drainage on the two sides of the body does not apparently play as important a role in the distribution of neuroblastoma metastases as Frew believed. Bothman and Blankstein demonstrated tumor cells in vessels of the choroid and concluded that metastases to the orbit were hematogenous. (2).

It is likely that blood-stream spread plays an important part in the dissemination of neuroblastoma metastases. Analysis of cases demonstrates that Frew's conclusions were incorrect. Metastatic lesions grouped in such a way as to give the Hutchinson syndrome have been found in an equal number of cases in which the primary one was in the right or left adrenal. Consequently it is not possible to support the concept of clear-cut asymmetry in neuroblastoma. That concept was based upon the recognition of bilateral differences in lymphatic drainage which, although not significant in the illustration given, may be responsible for other true asymmetries in disease.

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SYPHILIS: WHAT TREATMENT SHOULD BE GIVEN TO PREVENT AN INCREASE IN WASSERMANN-FAST FINDINGS?

John E. Hall, M.D.
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THE statement made by Sir William Osler, relative to the lack of knowledge by physicians concerning syphilis, is as true to day as it was the day this pre-eminent physician made it. He said "Know syphilis in all its manifestations and relations, and all other things clinical will be added unto you." In other words, he intimated that no physician understood the disease, and what was true then, is true today.

No other disease has such a diversity of opinion as to its treatment, both as to the time essential to effect a cure, and also, the form of agent to use in treating the disease. In fact, there is no agreement as to the initial dose of arsphenamine, which all concede is the chief agent to be used in the treatment of the condition, on account of the reaction associated with its administration. Nor is there any consensus of opinion as to how to treat syphilis. One group believes that better results are obtained from continuous treatment, while others think the treatment should be given intermittently, over a period extending fully three years. Those favoring continuous treatment state a cure may be reasonably expected to ensue from eighteen months of such treatment. Those favoring the intermittent form think it essential to give treatment for two months, and then give two months period of rest. The latter group believes that if antiluetic treatment be given continuously, the system acquires a relative tolerance to the drugs. However, no rule of thumb treatment should be ad-

vocated, since what may be sufficient for one patient may be entirely inadequate for another. For that reason, no dogmatic statement may be made to any patient as to the length of time necessary to bring about a cure.

There is no general accord as to the type of salvarsan to be employed. Some syphilographers claim the best results are obtained from the use of the old salvarsan or 606, while others, equally well informed, state that neosalvarsan brings about better results. It may not be denied that neoarsphenamine is the choice of the greater number of physicians, but this probably is accounted for by the fact that neoarsphenamine may be prepared and given the patient much more quickly than the old salvarsan, or 606. The element of time is more important these days than is the welfare of the patient, and so may enter into the form of treatment as a factor. The conclusion as to the efficacy of the antiluetic agents employed should be reached by the effects produced, as shown by the serological reactions of the blood. Naturally, no one of experience would regard a negative serological finding within the first year as indicating anything more than that the patient was responding to treatment, and by no means that a cure had been effected.

BISMUTH is the newcomer in the field of treatment of syphilis, its usage dating back to the past twenty-odd years. Prior to the advent of both salvarsan and bismuth, mercury was used practically exclusively in the treatment of the disease. Both bismuth and mercury are valuable adjuncts to salvarsan, which is pre-eminently the spirocheticidal drug used, regardless of the form employed.

The insoluble salts of both bismuth and mercury are apt to be walled off and remain in the tissues indefinitely, without any absorption whatsoever. These walled-off nodes, if they do not remain with the metallic drugs encapsulated, undergo resolution and suppuration, and such resultant painful abscesses cause the patients to object seriously to the deep gluteal injection of such drugs. It matters not what oily suspension may be used of either drug, the fact remains that very little of the metal is really injected, the greater part of the dosage remaining in the ampoule, and what little may be injected through the lumen of the needle is rarely absorbed.

Assuming the foregoing statement to be true, what is the objection to the administration of the aqueous solution of both drugs? It is contended by some that the absorption and elimination are more rapid than if the insoluble salts are used. Let it be assumed that this is true, but is it not preferable to have them absorbed and eliminated, rather than to employ the insoluble forms and have them become encapsulated and not absorbed at all? The aqueous solution of bismuth must be given intramuscularly, but the solution of mercury, in the form of the oxycyanate, may be given intravenously, without any reaction at all. The intravenous injection of mercury oxycyanate does not cause permanent blockage of the veins, diarrhea, ptyalism or nephritis. The dose usually given is one-sixth of a grain. There is more or less pain associated with the intramuscular injection of the aqueous bismuth, but there is less danger of its causing abscess than in the case of the insoluble form, and it most assuredly is absorbed.

As to inunctions of mercury; this is a filthy way of administering the drug, and it is doubtful if it be absorbed to any degree, since the dermatologists claim the skin is excretory in character, and has very little absorptive property.

Concerning the employment of the iodides in the treatment of syphilis: while they are not spirocheticidal, they do cause rapid absorption of gummata and condylomata. Many patients, who can not tolerate the smallest dose of the iodides by mouth, are able to take enormous doses of the sodium iodide intravenously, without any cutaneous symptoms, gastric disturbances or coryza. Should the intravenous use cause any bronchial spasm, or coughing, this is quickly relieved by the subcutaneous injection of ten minims of 1-1000 adrenalin chloride solution.

What is the "Herxheimer reaction," and how is it produced? Some of the so-called authorities state it is due to the administration of too much salvarsan at a dose, while others, held in equal esteem as authorities, say it is due to giving too small doses of the arsenicals. Such divergent assertions lead one to think it is all guesswork as to the underlying cause, and that the mechanism of therapeutic shock due to the administration of the arsphenamines is more or less guesswork, too.

RETURNING to our original subject; is it not true that there is an increase

in the number of syphilitics who have a "Wassermann-fast," or "fixed blood reaction? The primary object of this paper is to ascertain the opinions of my fellow practitioners on this subject. It is freely admitted by me that there has been an unusually large number of my patients within recent years who did not respond, serologically, to intensive treatment, and I am desirous of learning the cause, and if my routine treatment is at fault.

In discussing this subject recently with a nationally known dematologist, he said he was finding the same thing to be true in the treatment of his luetic patients, and that he felt the increase in "fixed" reactions was due to the lack of absorption of the heavy metals used in the treatment. He advocated giving thiosulfate of sodium in large doses, both by mouth and intravenously, over a period of six weeks. His theory was that the thiosulfate of sodium would dissolve out the excess of the heavy metals, thereby rendering patients more susceptible to the action of antiluetic drugs. Having followed his advice in quite a large number of patients, without obtaining any beneficial results, one is forced to regard such treatment as worthless.

The longer one treats syphilis, the more one is inclined to believe Sir William Osler was right in his intimation that no physician knew the disease, other than its cause. Personally, patients have been seen with "fixed" bloods, serologically, who I doubt ever had the disease, and following the most intensive treatment over long periods of time, they still had "positive" findings. I am aware that such statement may be iconoclastic, or, by some, may be attributed to ignorance on my part. It is not to be denied that I am ignorant, and I therefore desire to be enlightened by my more erudite brothers as to the cause of the increase in the number of fixed serological blood findings.

Perhaps the new drug, penicillin, may be the answer, but it is too early to say. Not having had sufficient experience with the "fever treatment," it is thought better to refrain from expressing an opinion as to its efficacy.

PARASITOLOGY

PARASITOLOGY IN THE U.S.S.R.

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IN my previous articles I have emphasized the fact that the Soviet Government labors unceasingly to keep both the front and rear lines free from epidemics; for, in the past, infection and disease have caused more deaths, and have disabled more soldiers, than bullet wounds. That Russia has succeeded in its aims is largely because the Academy of Sciences of the U.S.S.R. reorganized its work to meet the demands of the modern army. To accomplish this, special attention was paid to parasitical diseases. Fortunately, numerous universities, planned with special emphasis on parasitology, have been erected in remote parts of the country, in the poverty-stricken areas which have suffered from malnutrition and from the types of infections and diseases which are caused by animal parasites. Early in the present war, the Soviet Government began to receive rich dividends from its early recognition of the importance of this intriguing science, parasitology.

Little actual scientific information about the animal parasites which afflict man had existed prior to the twentieth century; nevertheless, it is of interest to note that Moses, who received medical instruction from the Egyptian priests, prescribed special sanitary laws to guard against plague from insect pests, as well as from infected animals.

CLINICAL parasitology, which had been sadly neglected, was developed rapidly and matured in Soviet Russia in the era following the October revolution. It has progressed to such an extent that clinical parasitology is considered one of the most advanced branches of science developed by the combined efforts of the zoologist and the medical man.

As we all know full well, many human diseases throughout the world are spread by animal parasites. While it is true that most of these parasites are more prevalent in tropical and sub-tropical regions, nevertheless, because of the war, the control of parasitic diseases presents clinical and public health problems all over the globe. We can no longer rely on the fact that certain diseases are considered tropical or sub-tropical. On this score it is sufficient to recall the epidemic of amebiasis (amebic dysentery) which involved many thousands of cases during the World's Fair in Chicago. Many of those affected returned to their home towns and spread amebiasis in their communities. Today geographical frontiers have lost their meaning, as masses of military forces are constantly being shifted from one place to another, often by air transport. The migration of civilian populations is increasing. Therefore, medical parasitology demands more and more attention on the part of all our public health authorities. Accordingly, Soviet medicine is now working harder than ever on new problems in the field of preventive medicine. We must realize that the discovery and perfection of serums, vaccines, and therapeutic agents all require careful study, along with very fundamental clinical investigation. There must be no surrender to any temptation to jump to conclusions, nor any sacrifice of necessary research, however difficult, in this vital undertaking.

Here is an example of how complicated is the procedure of preparing a typhus vaccine. The first step is to sterilize the shells of the hens' eggs, used as culture material, and to drill a small hole in each. The eggs are then inoculated with live typhus virus, sealed, put in the incubation room and kept there until the chick embryo dies, which takes about a week. By this time the culture contained therein has reached its greatest growth, and from this culture anti-typhus vaccine is prepared.

As we know, typhus is carried from person to person by body lice, and destruction of the louse is the quickest way to check it. Latest experimental studies show that the sodium salt of penicillin definitely inhibits the growth of typhus rickettsia in yolk sacs of fertile hens' eggs. Major epidemics of typhus have been extremely common in Russia in the past. In 1914, seven million cases were reported, and during the early years of the Soviet revolution the spread of the disease assumed enormous proportions. During the Seventh Congress of Soviets, Lenin said frankly: "Socialism must defeat the louse, or the louse will defeat socialism." Incidentally, it has been found that the severe cerebral symptoms and deafness accompanying typhus were due to hypocalcemia and ceased to occur after injections of calcium. A serum against typhus was developed recently, but it is still in the experimental stage, and while vaccination may not afford complete protection, it has certainly checked the disease. Early diagnosis of typhus now can be established through a modification of the complement fixation reaction.

Naturally the resistance of the human body means much in typhus treatment. For instance, an outbreak of typhus in Naples last year assumed major proportions, but though it became very serious among the civilian population, it was not so serious among the Allied troops there. Indeed, no case of typhus has so far been reported among our soldiers, because they are uniformly well fed, healthy, and clean, which protects them against the spread of typhus infection.

It is interesting to note that a new anti-louse powder, used now by the Allied armies, is the most potent and efficient which has yet been invented. Because of its great value, the formula is carefully guarded as a military secret.

Hitler has made many mistakes in his effort to conquer the world, but one of his most fatal miscalculations was his arrogant underestimation of Soviet brains in science and technology. Today Soviet research, with its tools sharpened by decades of indefatigable labor and experiment, stands on the threshold of an era of still greater achievement.

IN the August, 1944, issue of *California and Western Medicine*, there appeared an interesting and valuable article on a recent outbreak of Shigella (Newcastle) dysentery. It is based on the observations of Major Victor G. Rubenstein, M.C., and Lieutenant R. L. Phillips, Sn. C. of the United States Army Medical Corps, and specifically confirms the findings of the Soviet experts on the hygienic handling of troops.

Another very interesting article entitled "Parasitology Expeditions in the U.S. S.R.," by Doctor Pavlowsky, appeared in a recent bulletin of *Voks*, a publication of the American Soviet Society, organized for the cultivation of cultural relations

between Russia and other countries. This publication was widely distributed in the United States by the American-Russian Institute of San Francisco. The geographical aspects of this article, and the details it gives pertaining to disease-spreading parasites and their carriers, are all-absorbing and hold the attention of the reader.

The presence of tick fever in the U.S.S.R. was brought to light for the first time by the work of the Government-sponsored research expeditions to the Crimea and the Southern Ukraine. In man, tick-borne relapsing fever develops as a sudden acute illness with high fever and frontal headache. This malady lasts from three to ten days, with a fatality of about four per cent. So great an authority as Pavlowsky contends that the tick vector *Ornithodorus papillipes* can starve for more than five years, and still retain its capacity for infecting human beings with recurrent tick fever.

New febrile diseases spread by ticks were also discovered in Western Siberia and the Far East. Credit for these discoveries goes to the many expeditions sent out by the Russian Government over a period of years. The investigators described these fevers in full detail and also established the fact that wild rodents are the carrier hosts of the ticks. As a result of these findings, the possibility of preventing these diseases immediately attracted the attention of the public health authorities who carried out the expeditions. The task was of such magnitude that in some instances expeditions had to be sent out season after season for a number of years to obtain the necessary data and material for further study in the Soviet research laboratories. As a result, science has been enriched not only with a knowledge of the preventive requirements for controlling disease-spreading parasites and their carriers, but also by the development of the most efficient methods for curing the diseases.

One of the specific discoveries resulting from these Soviet research expeditions is of special interest. There has existed a form of ulcer known as oriental sore (Bouton d'Orient), a malady long familiar to European residents in the Far East. It took four expeditions to the valley of the Murgrab River in Turkmenia to establish the fact that the sand flies, which thrive and multiply prodigiously in the burrows of desert rodents there, were responsible for the spread of this form of ulcer. Previously none had been able to prove that infection with this form of leishmaniasis, in animals or in man, resulted from the bites of infected flies.

Leishmaniasis is quite common in hot countries. Curiously enough it exists in two different clinical forms. One is cutaneous leishmaniasis, which we have just discussed, which is primarily a tropical disease rarely found in the United States. The other form is internal leishmaniasis, which mainly affects children. Research which was carried out in Ashkhabad, the capital of Turkmenia, proved that only one out of every two thousand mosquitoes carried this particular infection. Then, in rural localities in Turkmenia, mosquitoes were found breeding in the nests of rodents which were infected by leishmaniasis. Naturally, it was then realized that the most dependable way of eradicating the disease was to destroy the breeding-places of the mosquitoes. Chloropierin has been used successfully to poison both the desert rodents and the breeding mosquitoes. This method of prophylaxis does the work, but its effect lasts only from one to two years, and such a laborious campaign is also quite costly. Recently, entomologists have begun with good results to experiment in the use of explosives to exterminate mosquitoes and other disease-bearing insects. This new method has proved still more practical and far less costly.

ONE could go on at length with intriguing instances of the human benefits which have resulted from the parasitological work of the U.S.S.R., but space forbids. The exigencies of war have once again stimulated to greater accomplishments the brains of parasite experts in the Soviet Union and in other lands. The advantages the human race will receive from their findings will put another small but very valuable credit entry against the huge debit of world war.

450 SUTTER STREET.

CULTURAL MEDICINE

THE PENNSYLVANIA HOSPITAL

THE credit for suggesting the foundation of the Pennsylvania Hospital, oldest in the United States, belongs to Dr. Thomas Bond, of Philadelphia, product of European schools (Paris), noted surgeon and clinician (first lithotomy in America done by him in 1756; father of clinical medicine—first clinical lecture in America given by him at the Pennsylvania Hospital December 3, 1766), and one of that group of able pre-Revolutionary teachers of surgery—John Jones, William Shippen, Jr., John Warren, Richard Bayley, and Wright Post. However, Bond was unable to get anywhere with his project for both residents and "strangers" until he enlisted the cooperation of Benjamin Franklin, without whose approval nothing of moment affecting the community could seemingly be done in Philadelphia. "I am often asked," said Bond to Franklin (*Autobiography* of Franklin), "by those to whom I propose subscribing, 'Have you consulted Franklin on this business? And what does he think of it?' And when I tell them I have not . . . they do not subscribe, but say, they 'will consider it'."

Franklin heartily approved of Bond's proposal, subscribed generously himself, and immediately formulated a plan, employing a sophisticated technique that the publicity experts and politicians of today would envy. In the first place, he prepared the minds of the people by writing on the subject in the newspapers, "which was my usual custom in such cases, but which he [Bond] had omitted."

Subscriptions came in at a rate which enabled Franklin to estimate just about what could be raised in this manner—not, of course, enough to build. A synergist would be needed. The Assembly, the governing body of the Province, would have to be skillfully intrigued into supporting the project. Franklin found the Assembly opposed to any grant, which of course did not baffle him a bit. What he did to these innocent people was a caution. In writing the story himself, Franklin said: "I do not remember any of my political manœvres, the success of which at the time gave me more pleasure; or wherein, after thinking of it, I more easily excused myself for having made use of some cunning."

A petition for assistance was accordingly presented to the Assembly, and sourly received, although Franklin appealed in emotional terms designed partially to condition the members to his further adroit steps in the matter:

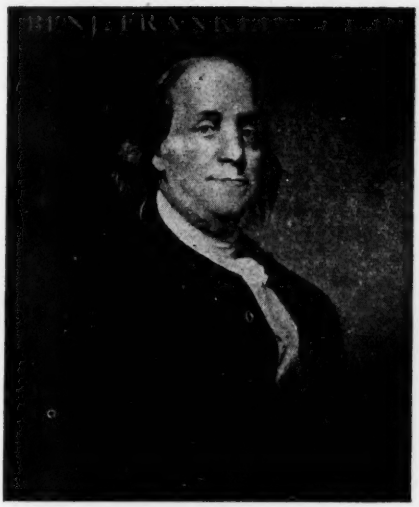
> "Your petitioners beg leave further to represent, that tho' the good Laws of this Province have made many compassionate and charitable Provisions for the Relief of the Poor, yet something farther seems wanting in Favour of such, whose Poverty is made more miserable by the additional weight of a grievous disease, from which they might easily be relieved, if they were not situated at too great a Distance from regular Advice and Assistance; whereby many languish out their Lives, tortur'd perhaps with the Stone, devour'd by the Cancer, deprived of Sight by Cataracts, or gradually decaying by loathsome Distempers; who, if the Expence in the present manner of Nursing and attending them separately when they come to Town were not so discouraging, might again, by the judicious Assistance of Physic and Surgery, be enabled to taste the blessing of Health, and be made in a few Weeks, useful members of the Community, able to provide for themselves and Families."

The members of the Assembly had an incomplete realization (to say the least) of the resources of the superman to whose methods they were bound in the end to helplessly capitulate. For Franklin it was just a little elementary practice in the arts which he was later to bring to bear in France in behalf of the Thirteen Colonies battling for their freedom.

"The country members did not at first relish the project; they objected that it could only be serviceable to the city, and, therefore, the citizens alone should be at the expense of it; and they doubted whether the citizens themselves generally approved of it. My allegation to the contrary, that it met with such approbation as to leave no doubt of our being able to raise two thousand pounds by voluntary donations, they considered as a most extravagant supposition and utterly impossible."

At this point Franklin must have felt a kind of mirthful pity for the legislators who, childlike in his hands, were about to become, willy-nilly, cofounders of the Pennsylvania Hospital.

From the Editorial Research Department of the MEDICAL TIMES.



Benjamin Franklin, F.R.S.

(From the painting by Joseph Wright)

Now Franklin, as we shall see, had a double plan—not only to make the Assembly "come across," but also to give subscribers an additional motive for subscribing. All hands were to be led to the contribution box.

Franklin proceeded with his ruse. He "asked leave to bring in a bill for incorporating the contributors according to prayer of their petition, and granting them a blank sum of money; which leave was obtained chiefly on the consideration that the House could throw the bill out if they did not like it. I drew it so as to make the clause a conditional one, viz.: And be it enacted by the authority aforesaid, that when the said contributors shall have met and chosen their Managers and Treasurer and shall have raised by their contributions a capital stock of two thousand pounds value, the yearly interest of which is to be applied to the accommodation of the sick poor in the said hospital, and free of charge for diet, attendance, advice and medicines, and shall make the same appear to the satisfaction of the speaker of the Assembly for the time being; that then it shall and may be lawful for the said speaker, and he is hereby required to sign an order on the provincial treasurer, for the payment of two thousand pounds in two yearly payments, to the treasurer of the said hospital, to be applied to the founding, building and finishing of the same."

Franklin continues: "This condition carried the bill through; for the members who had opposed the grant, and now conceived they might have the credit of being charitable without the expense, agreed to its passage; and then in soliciting subscriptions among the people, we urged the conditional promise of the law as an additional motive to give, since every man's donation would be doubled; thus the cause worked both ways. The subscriptions accordingly soon exceeded the requisite sum, and we claimed and received the public gift, which enabled us to carry the design into execution. A convenient and handsome building was soon erected, the institution has by constant experience been found useful, and flourishes to this day."

THUS Franklin adds the organization of a great hospital (of which he wrote the first history, printed at his own press: *Some Account of the Pennsylvania Hospital; From its first Rise, to the Beginning of the Fifth Month, called May, 1754)* to his other notable accomplishments in the medical sphere: bifocal lenses, flexible catheters, the treatment of paralysis by electricity, papers on lead poisoning, gout, body heat, sleep, deafness, nyctalopia, infection, the death rate of infants, inoculation against smallpox, and medical education.

In consonance with the general greatness of Franklin's character, he, despite his dynamic role in the founding of the Pennsylvania Hospital, gives Bond all credit for its inception.

THE Assembly granted a charter which became operative through the Lieutenant Governor's signature on May 11, 1751.

The subscribers organized at the State House on July 1, 1751, electing twelve Managers and a treasurer. On July 6, 1751, Franklin was chosen as one of these Managers and became their first Clerk. Dr. Bond also became a Manager. The first Minute Book of the proceedings of the Board is partly in Franklin's handwriting.

To Dr. Bond and Franklin was assigned the duty of having a design made for the corporation's seal. This resulted in the choice of the Good Samaritan taking the sick man to an inn, with the inscription

"Take care of him, and I will repay thee."

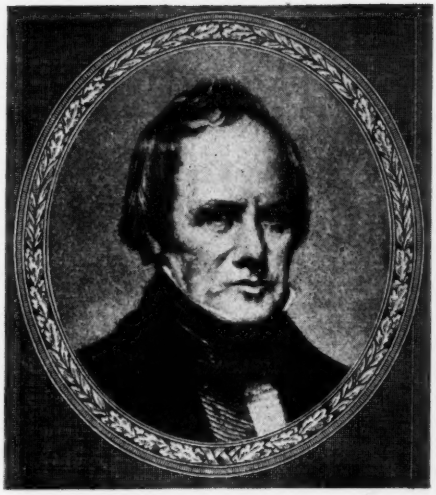
Worthy of special note is the fact that Dr. Thomas Bond, with his brother, Dr. Phineas Bond, and Dr. Lloyd Zachary served the hospital for three years without compensation and supplied all the medicines for that time at their own expense.

The permanent buildings were designed and erected by Samuel Rhoads, a builder and amateur architect who was chosen as one of the first twelve Managers. The fact that those parts of the hospital that he planned and built in distinguished Colonial style are still in use attests his skill and the wisdom of his selection as a Manager.

After occupying temporary quarters on what is now Market Street, to which patients were first admitted on or about February 10, 1752, the east wing of the permanent structure, the first part to be built, was opened in 1755 on land which had been purchased on Pine Street (cornerstone laid on May 28 of that year). On June 30, 1755, Benjamin Franklin was elected President and presided at the first meeting of the Board when it met in the new building.

Packard, in his *Some Account of the Pennsylvania Hospital from Its First Rise to the Beginning of the Year 1938*, suggests that it was probably the practical Franklin who instituted occupational therapy (supposedly a modern idea) at the Pennsylvania Hospital in the form of spinning wheels.

THE history of the Pennsylvania Hospital over the years is the history of the Thirteen Colonies and of the country since 1776, as well as of many "Kings of the Clinic." Throughout the French and Indian War, the Revolution, and all the wars since including World Wars I and II, as well as in the intervals of peace, it has played a part. If we call a roll of its clinical royalty we shall have to name, in partial addition to those already mentioned: Benjamin Rush, the only M.D. to sign the Declaration of Independence; John Morgan, Director General of the Medical Department of the Continental Army; Philip Syng Physick, first to wash poison out of the stomach, use catgut ligatures, and remove tonsils with a guillotine; Caspar Wistar, great anatomist; William Shippen, Jr., organizer with Morgan of the Medical Department of the University of Pennsylvania (1765); John



Thomas Bond, M.D.

1712-1784

C. Otto, first to make case reports of hemophilia; William Wood Gerhard, first to distinguish typhoid and typhus fevers; George B. Wood, founder and editor of the United States Pharmacopeia and the National Dispensatory. If one wishes to picture much of the aristocracy of American medicine, add to the foregoing names such distinguished personalities as John Kearsley Mitchell, S. Weir Mitchell, John Syng Dorsey, Joseph Parrish, Thomas Chalkley James, Hugh L. Hodge, Charles D. Meigs, John D. Meigs, Arthur Meigs, Jacob Randolph, John Rhea Barton, George W. Norris, Thomas G. Morton, D. Hayes Agnew, George C. Harlan, John H. Packard, Richard J. Levis, William Hunt, and R. G. Le Conte.

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THE PSYCHONEUROSES IN GENERAL PRACTICE

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THE ubiquitous psychoneuroses obtrude themselves on the attention of the general practitioner constantly. Regarded as nuisance or godsend, the psychoneuroses, like contaminating organisms in a culture medium, often becloud the real diagnostic acumen of the clinically-oriented physician.

It is illuminating to reflect on conditions of practice in the days of the "family doctor." Certainly in the more rural areas medical facilities were meager, the doctor was often forced to use his wits to the utmost, and he developed a homely and even unorthodox philosophy. But he had one compensating advantage; he was more or less intimately acquainted with the life history of his patients. Thus he often made shrewd if not then-considered scientific deductions and began to associate Mrs. Smith's asthmatic attacks with Mr. Smith's philandering propensity. Such insights have been largely abandoned by the general practitioner of today due to sociological and economic changes in the population on the one hand, and the development of precision scientific laboratory techniques on the other hand. Nevertheless a combination of scientific techniques with homely observation makes for great diagnostic acumen. It must be added parenthetically, however, that what we alluded to as homely observation is now being subjected to study, and is found to be amenable to scientific discipline quite as much as any other specialty, and constitutes the relatively new branch of medicine known as psychiatry.

It is not alone of importance that the physician be enabled to separate a case of psychoneurosis from a definitely organic entity. Even more important, as that fast-developing phase of the healing arts known as psychosomatic medicine is showing, the organic case may be strongly influenced by the coexistence of neurotic trends, which often considerably accentuate and exaggerate the symptoms, sometimes to the not inconsiderable mystification of the practitioner.

Recognition of the Psychoneuroses

What is a neurosis? Formerly the field of psychoneuroses was arbitrarily divided into the true neuroses—those in which symptoms were mainly in the somatic field, and those in which symptomatology appears to relate largely to the non-somatic or psychogenic field. This is a very unessential and artificial distinction.

A psychoneurosis is a disorder of adaptation in which the mental conflict finds substitute and symbolic forms of expression. It is a condition in which instinctive drives are actively opposed by social and ethical prohibitions, causing, so to speak, a detour of instinctual energies into apparently unrelated, and hence symbolic, forms of expression.

Traditionally, the diagnosis of psychoneurosis is made by exclusion. Of course such procedures are often resorted to in clinical diagnosis in general practice, but this is not the positive aspect. Diagnosis by exclusion of organic conditions is fraught with some danger. Better than this is the positive identification of a psychoneurosis by its own particular characteristic signs and symptoms.

In general, there are two major emotional attitudes which accompany psychoneurotic complaints. There is either a superabundance of anxiety over the somatic complaints or an attitude of indifference to them, the result of a dissociated state which is nevertheless accompanied with considerable suggestibility, as in hysteria.

In the neurasthenic and anxiety states one often notices considerable diffuse anxiety about the symptoms. The symptoms form no well-defined pattern and show a considerable tendency to irradiation in that they change, with a tendency to involve more and more areas with successive interviews. The patient's explanations and complaints tend to be repeated over and over again; they amount often to a veritable organ recital. The patient appears eager to grasp at any straw the doctor may let loose about a possible organic substratum for his complaints. He will show little tendency to be frightened

or appalled at the doctor's consideration of some incurable disease as the etiology of his disorder. Indeed he may appear relieved and grateful that he is being considered for admission into that blessed fraternity of physically ailing sufferers. Of course, the latter feature is a reflection of certain cultural tendencies in our society to stigmatize anything smacking of mental disorder. He fears the possible suggestion from the doctor that his illness may be "imaginary" or "mental."

On the other hand, in hysteria because of a state of dissociation, there is often a marked indifference to the symptomatology, as if the patient in presenting the disabling symptoms had said: "This is your problem now, not mine." But it should be remembered that increasingly we find more and more of the mixed psychoneuroses as the more bizarre manifestations, such as hysterical convulsions, are rarely encountered.

Such findings coupled with little organic evidence of disease strongly suggest the possibility of the psychoneuroses. In addition to that if the doctor permits the patient any degree of ventilation of his personal affairs, most frequently some of the disturbing and distressing factors in the life of the sufferer will be uncovered.

As stated, the diagnosis of psychoneurosis is not to be made by exclusion alone. Positive criteria as given by Ross are: (1) The peculiar and often contradictory nature of the symptoms. (2) Presence of anxiety, apprehension, panic like that stated, or unusual apparent indifference to the symptoms. (3) Attitude of the patient toward the illness; is he inclined to exaggerate the severity of the condition? (4) The life history; does it show a succession of such incidents?

It is incorrect to say that the patient does not have the symptoms of which he complains, e.g., the pain, the discomfort, the shortness of breath, etc. These symptoms are present but initiated through causes other than the ones to which they are usually attributed. Not infrequently there exist symptoms which are actually based on organic pathology but markedly accentuated by the coexistence of intrapsychic conflict, in the intelligent treatment of which, a broader perspective, including every factor of personality organization, becomes indispensable. Some of the reasons for this becomes apparent from the following case report.

Case Report

Case J. K. A thin, middle-aged woman; first seen in clinic 2-29-'28 with the following complaints: 1) dry tongue; 2) tired sensation; 3) no appetite; 4) running nose. Diagnosis at this time chronic sinusitis.

Returned for treatment 4-24-'42 with the following complaints: fatigue, drowsiness, nausea and dizziness, all of 1 year's duration; hot flushes of 4 years duration. Physical examination disclosed hypertensive heart disease. Blood pressure 220/100.

Patient was treated medically for a number of months. She related that at one time she had had a presentiment that she should see a psychiatrist, but was discouraged from doing so by the doctor. However, when she expressed a fear of doctors he referred the patient to a psychiatrist, who made a diagnosis of psychoneurosis, anxiety type.

As the history unfolded itself in successive interviews ample ground for the psychoneurosis became evident.

She was an illegitimate child adopted at 17 months of age by a woman who had no children of her own, but whose two previous adoptions had died. According to patient the foster mother really did not want her, but adopted a baby because she was running around with men and thought that a child might keep her home.

As an example of the type of home and foster mother she was subjected to, patient recalled an incident when the foster mother was swabbing out her mouth and throat. When the patient proved resistive the foster mother seized her and in a fit of anger tore the corners of her mouth. The patient showed the scars.

She was severely whipped on the slightest pretext. The patient vividly recalled her terror as a child being forced to accompany her foster mother when the latter went to neighbors' cellars to steal coal.

She married at 17. Husband was a very heavy drinker. At the time she was being treated she had been separated from him for 10 years though not divorced. The husband had been extremely tyrannical and interrelationships between all the members of the family were badly disturbed. However, after they separated the children came back to live with her and these were the only happy memories she could recall.

Gradually with successive interviews a

good working transference was established, and the patient began to gain considerable relief from the psychic catharsis. As a result of this there developed a much deeper insight into her condition. For example, in one of the interviews she stated: "My daughter, Marion, has been quite a problem to me. Well, you know, since I talked to you it occurred to me that I failed her as much as my foster mother failed me. Marion used to say I didn't treat her right. It didn't occur to me until two days ago that I favored the boys. What is it in me that does that? It didn't occur to me before. You know my daughter used to want to kiss me and I never liked that. As a child I worshipped her, but I couldn't handle her."

It was subsequently revealed that when her daughter was much younger the husband had attempted a sexual assault on the child. The girl had not told her about it until much later. This was the last straw and she had been separated from the husband for 10 years. What rankled the patient was that for so many years she had not known about it, and, so to speak, had been an unsuspecting dupe. As a result she conceived this hostility, practically unconscious, toward her daughter. Notice that as a result of her growing insight she had worked through this and revised her attitude. Her statement, "It didn't occur to me until two days ago," etc., is testimony to this fact.

At a subsequent interview she stated: "You know, doctor, I think I never grew up. Only in the last few weeks I think I grew up."

"Why?"

"I was acting so childish, wanting things. I've been doing a lot of thinking." She adds how little things don't hurt her so much anymore nor upset her as much.

About her married life she states: "You see when I married, though I was 17, I didn't know anything about passion; he didn't know either. I suppose I was frigid, but he didn't try to rouse me. So he was cheated, too. He wasn't a loving or affectionate husband."

"Did he ever upbraid you for having so many children?"

"Of course, doctor. He used to withdraw and still the children came. He didn't get any satisfaction from it either. He used to doubt the parentage of the children. I used to have a Jewish insurance agent and when my husband was out of work he kept up the insurance, and do you know until the boy was 17 he used to call him a Jewish bastard. He used to name almost any man as the father of his children. I have another boy, Bob, who had thick lips and a different kind of nose, and he said, 'You've done many many things, but this is the first time you've slipped a nigger over on me.'

"We shouldn't have gotten married to each other. Both our backgrounds were bad. His men folk used to drink and beat their women. One time he hit me so hard that a tooth came up through my lip, and all for what? Because I came home late from the hospital when my Marion had infantile paralysis.

"Well, I think I've come a long way as regards my husband. I don't have the bitterness toward him that I had. I've come to think he might have been the victim of circumstances as much as I have been."

At a later interview she remarked, "I think the strangest part is I've been so busy helping Marion, I've been helping myself.

"It got to the point where Marion was indifferent and neglectful. I used to have to wash her personal things. Now she washes my things as well as her own. I have been teaching her how to sew. And I'm getting to learn to tolerate her affection. Imagine my saying 'tolerate' with my daughter, but it's true.

"It just shows that where someone failed me I in turn failed Marion. But I'm fortunate in having had another chance with Marion.

"Oh yes, I've finally come to a decision after coming here, and I'm instituting divorce proceedings. I've quit alibiing. Previous to coming here there was no thought in my mind of doing anything. I had myself dead and buried. Now each day isn't long enough. I'm even going to take up designing. I don't get depressed so much now."

THIS patient, no doubt, continued to have hypertensive heart disease, but note how much her symptoms have been alleviated. Without the emotional relief she obtained in psychotherapy it is highly doubtful that any amount of medication could have accomplished a great deal.

Moreover, in the psychoneuroses, when the symptomatology is psychologically explored, there is no telling where it will lead. Uninformed about this the clinician may continue working endlessly with

presenting symptoms, always in a blind alley and making no headway. How far the presenting symptoms may be misleading with regard to their real and basic causes may be seen in the following case report.

Case Report

Case C. K., a young matron 28 years of age. States that after the birth of her first child she began to feel nervous. She consulted her family doctor who gave her bromides and "shots," to no avail. She has sweating in the palms of her hands; has noticed her heart beating fast. Her two children bother her a great deal. She has noticed no change in her eyes lately, nor in the size of her neck. Physical examination was negative. Laboratory findings were negative including stool examination for amebae and B.M.R. of —1. Patient had a speech defect and stuttered noticeably at certain times.

She was referred to the psychiatrist with the tentative classification of psychoneurosis, anxiety type.

On the first psychiatric interview she states again that her difficulties began with the birth of the first baby. She thinks it very strange that the doctor should have stated that if she had more babies she wouldn't get so nervous, since it is the children who make her so nervous. Now she admits she doesn't get along so well with her husband. He is very quiet at home. He is an insurance man who does a lot of talking at work, but at home says very little, only reads his books and papers. She wants someone to talk to her. She has mentioned this many times to him, but gets no satisfactory answer. She says: "The worst part of it is he is too quiet to suit me. Maybe I should have a different husband. Maybe he's interested in another woman. Don't you think that's possible? He loves the kids and takes them out often; maybe he's tired of me."

She shows the doctor a picture of her husband and the doctor remarks what a fine-looking man he is, to which she answers, "But that doesn't help me. Looks isn't everything."

She is urged to bring her husband in for consultation.

At the next interview she states she has spoken to her husband but he had objected and said he had no time to see the doctor. She states: "I'm normal like anybody else. I don't know what to say. I wouldn't know how to express it."

At a later interview she relates a dream wherein she had looked through many windows. In the morning she looked through a window and forgot her dreams and remarks that she always forgets a dream when she looks through a window.

Doctor inquires what she is trying to forget. She answers: "I lied to you about my father, that he died a natural death. He committed suicide (here patient becomes agitated and begins to cry). Every time I see knives or sharp things I shiver. He had been separated from my mother, living by himself. He locked himself in and barricaded the door and cut his wrists with razor blades and it was three days before they found his body. He used to talk foolishly. It bothers me a great deal because I'm afraid of losing my mind. That happened about a year ago."

"Does your husband know about this?"

"Yes and every time he gets mad he says 'aw, you're as crazy as the rest of your family.'"

"Your father and mother didn't get along very well?"

"No, as long as I can remember, for 25 years he'd come and go, separate, talk foolish and act foolish. That bothered me when I was a child. I used to cry a great deal.

"He used to sleep on the floor and say the food was poisoned and the medicine was poisoned. He used to go to doctors and he'd get medicine. He'd use it once and throw it away. He used to do the craziest things. No, he was never committed to an institution. I thought he should be committed, but my mother wouldn't think of it; said she'd feel guilty. He worked off and on, but would get crazy ideas and would say the factory poisoned his lunch and would quit one job after another."

At a later interview she remarked: "It seems my husband is more nervous than I am. I always make perfect meals. My house is always clean; my children are clean. I keep myself clean and go to the beauty parlor often. But he never says anything, no compliments, no nothing.

"One thing has been on my mind. I thought if I had another baby things would be different. It cleans the blood, I heard."

It develops now that coitus interruptus had been practiced. Curiously, neither wife nor husband objected to more chil-

dren. She had noticed a change in husband's behavior 2 or 3 years ago and it was about then he began to practice interrupted coitus.

They had slept in different rooms for the past year. She sleeps in the youngest boy's room because of the latter's habit of falling out of bed. She was advised to get a crib for the boy, given contraceptive instruction and advised to make the first overtures to her husband.

She laughingly comments that other people have advised this too, but she had always made the overtures and it was a matter of pride, too.

The husband consistently refused to be interviewed and patient finally quit psychiatric therapy.

OBVIOUSLY, then, there is often a long story behind the presenting symptoms which must be investigated before genuine relief can be obtained.

Management of the Neuroses

The first essential in the treatment of the neurotic patient is to be a good listener. However, psychotherapy does not consist of mere passive listening. The transference to therapist, resulting in a kind of identification, means that the therapist can follow the dynamics of the patient's personality. By a process of empathy he knows how the patient feels and is even able frequently to anticipate what the patient will think and feel under given circumstances. Because of this close tie, by interpretations at the required times and by a properly placed query or comment, he guides the flow of conversation from the patient. Because the therapist's comments and interpretations touch upon highly-charged emotional trends the ties binding the patient to the doctor are intensified. This is the positive transference. Obviously this requires considerable knowledge of psychodynamics. It is not only a matter of knowledge but also a matter of intuitive feeling and art, gained largely through experience and practice.

But, significantly, such treatment is time-consuming and the busy practitioner may not have the requisite time to devote to the psychoneurotic patient. Hence the specialty of psychiatry.

Some Cardinal Rules for the General Practitioner

Although the general practitioner has neither the time nor perhaps the experience to deal with the neuroses there are a few helpful rules he may follow.

1. Even if dynamic interpretations are beyond the doctor's training he can be a good, kind listener, as patient as his time will permit.

2. Do not deliver diatribes and homilies to your neurotic patients—such statements as that they ought to be ashamed of themselves over the suffering and inconvenience caused to their relations and friends. This will only increase anxiety and guilt feelings and make the symptoms worse.

3. Do not morally condemn the patient, overtly or to yourself. It has often occurred to me at first meeting to feel indignant with a patient and experience something of a revulsion of feeling over his supine attitudes. But when the history later unfolds itself it has often become apparent to me what a pawn in the hands of fate he has actually been. Not only have I had to revise my first, half-formed opinion, but I have frequently conceived great respect, certainly sympathy, and often even admiration and regard for the patient.

4. If you have made a diagnosis of psychoneurosis and have carefully excluded the possibility of some organic disease, do not be seduced into prescribing medication with the idea that it will cure anything. Do not be seduced into an "organ recital" in which any encouragement is given the patient to believe some definite physical ailment is present. Many psychoneurotics anxiously await word proving they are physically ailing and will joyously pounce on a mere syllable the doctor lets drop which tends to prove that the patient has so and so. I have seen thyroidectomized, cholecytectomized, panhysterectomized, etc., patients in whom surgery meant only "carrying coals to Newcastle"—anything but therapy.

5. If you cannot do anything else for the patient be a sympathetic, non-condemning listener and make a few encouraging and reassuring remarks.

185 NORTH WABASH AVENUE.

CANCER

Edited by John Mumford Swan, M.D. (Pennsylvania), F.A.C.P. Executive Secretary of the New York State Committee of the American Society for the Control of Cancer, Inc., assisted by Charles William Hennington, B.S. (Rochester), M.D. (Hopkins), F.A.C.S.

REPORT OF CASES OF TEN YEAR CURES OF CANCER FROM THE HOSPITALS OF ROCHESTER

In 1939 we reported sixty-seven new five year survivals of patients treated in 1934 bringing the total number at that time up to 365 since the beginning of the five and ten year survival registry.

These sixty-seven cases were distributed as follows: acanthoma, 1; bladder, 2; breast, 27; cecum, 1; colon, 9; kidney, 2; nose, 1; parotid gland, 2; prostate, 2; rectum, 3; sarcoma, 1; stomach, 1; testicle, 1; thyroid, 1; uterus, 12 (body, 2; cervix, 10).

During the sixth year two of the breast cases, three of the gastro-intestinal cases, and one of the male genito-urinary cases were lost. One of the patients in the breast group developed a second cancer of the ovary; two died of late recurrence and one of unknown cause. One of the gastro-intestinal group died of cancer and two of unknown cause.

During the seventh year three of the breast cases died of late recurrence and one of tuberculosis and three of the gastro-intestinal cases reported lost in 1940 had again been located and were found to be living without recurrence. One of the male genito-urinary group died of scalding and one was lost. Of the miscellaneous malignancies one patient was living but presented evidences of mental deterioration thought to be due to thyroid disturbance. One patient with primary acanthoma of the larynx died of cancer of the splenic flexure of the colon and one with primary sarcoma of the scrotum died of cancer of the prostate.

During the eighth year three of the breast patients, two of the gastro-intestinal tract cases and one of the miscellaneous malignancies were lost. Of the breast cases one of those living had diabetes; one died of myeloid leukemia and one died of unknown cause. Of the gastro-intestinal cases one died of metastasis and one reported lost previously returned and was again taken up. Of the miscellaneous malignancies the patient with thyroid carcinoma reported insane during the previous year was still living.

During the ninth year one breast case, three of the patients with gastro-intestinal carcinoma, two patients with carcinoma of the genito-urinary tract (except uterus and ovary) were lost. Of the breast patients one of those living had diabetes and one patient died of cardiovascular disease.

During the tenth year six patients were lost. One bladder case, and five of the breast cases. Two died both of late metastasis; one of the ovary and one of the rectum. Three previously reported lost were again located and taken up. Thirty are living (45.0 per cent) distributed as follows: bladder, 1; breast, 7 (one with recurrence); cecum, 1; colon, 4; nose, 1; parotid, 1; rectum, 2; testicle, 1; thyroid, 1; uterus, 11 (two of the body, nine of the cervix).

This brings the number of ten year survivals up to 209.

During the fourteen years that we have been endeavoring to determine the results of the treatment of cancer in a group of hospitals in a single community we have had interesting correspondence with surgeons who are following the results. One of these surgeons has written as follows: "The purpose of inquiry concerning the relation of five to ten year survivals is to allow us to answer the anxious individual when he asks whether he is 'now safe' from recurrence? The reply to such a person must be based on cases that are followed to 10 years. Cases that are lost ought, therefore, not to be included in these figures. Lost cases are valueless in answering such a person. Only cases that are followed THROUGH are of value

Presented at the Twentieth Annual Meeting of the New York State Committee of the American Society for the Control of Cancer, held at St. Mary's Hospital, Rochester, October 3, 1944.

TABLE I
Follow-up of 67 cases of cancer from five to ten years after treatment.

	To be Accounted for	Died of cancer	Died of other causes	Lost	Cases reported lost, taken up	Living at end of year
6th year	67	3	3	6	0	55
7th year	55	5	2	1	3	50
8th year	50	2	1	6	1	42
9th year	42	0	1	6	0	35
10th year	35	2	0	6	3	30

in this aspect of the problem of statistics. As an illustration take the case of a patient with breast cancer. After she had become a five year survival her physician wrote me that she was having some swelling of the arm. The question was what was causing pressure on the lymphatics. It could be either a recurrence of the cancer in the axilla or merely a progressive contraction of the scar tissue due either to the scarring of the operation itself or to the slower scar effect of the postoperative x-ray therapy which she had had. Nothing was palpable in the axilla that would be helpful in forming a conclusion. If the swelling were due to x-ray, continued irradiation would have been undesirable. If the swelling were due to recurrence, it must be of low grade and therefore something should be done about it either with surgery or with x-ray. To answer this question it is desirable to know how safe from recurrence a five year survival is. From what I have read I thought that the 'betting odds' were good in this case and I urged the doctor to do nothing about it. Her continued survival to this day shows that it was not a recurrence. The swelling of the arm has persisted but not grown worse. If we had known that recurrence after five years was rare we could have had data upon which to base our 'hunch'."

In addition to these details we are still following 118 cases of survival from eleven to nineteen years and one case in which the patient had a radical breast amputation in 1917 and who is still living without recurrence.

These cases are distributed as follows: *Adrenal body, 1; bladder, 1; *breast, 44; cecum, 5; cervical lymphnodes, 2; colon, 1; hypernephroma, 1; ileum, 2; jejunum, 1; kidney, 2; lip, 2; †ovary, 3; mouth, 1; rectum, 2; sarcoma, 5; sigmoid, 3; skin, 1; stomach, 2; testicle, 1; uterus, 37; (fundus, 26; cervix, 11); vulva, 1.

* One with recurrence.

†One of these cases was reported in MEDICAL TIMES 72:17 (January) 1944.

American Geriatrics Society Third Annual Meeting

MEETING precedes June, 1945, A. M. A. Convention.

Scientific programs on June 8th and 9th, 1945. Executive meeting June 7th.

Annual dinner, Hotel Commodore, June 8th.

Fellows and associates are advised to engage accommodations now in view of crowded conditions in New York hotels during these conventions.

Please register before attending meetings. No charge for registration.

The limit of time allotted to the reading of a paper will be fifteen minutes.

Author is requested to arrange for one discusser. Discussions will be limited to five minutes each.

Manuscripts and discussions must be turned in to the chairman of the program committee, Dr. Edward B. Allen, 121 Westchester Avenue, White Plains, N. Y., by May 1st.

Before May first each speaker must have an abstract of his paper, limited to one typewritten page, double-spaced, in the hands of the Chairman of the Program Committee.

Authors may have articles published or society will arrange for their publication.

Secretary: Malford W. Thewlis, M.D.
Wakefield, R. I.

CONTEMPORARY PROGRESS

MEDICINE

Potassium Bicarbonate; An Adjunct To Chemotherapy in Pneumonia Complicating Cardiac Decompensation

J. OHNYSTY and W. Q. WOLFSON (*New England Journal of Medicine*, 231: 381, Sept. 14, 1944) note that kidney damage may complicate sulfonamide therapy, but that the incidence of this complication is decreased if adequate urinary output is maintained and the urine is kept alkaline. These measures are especially important in patients with cardiac insufficiency who tend to retain ingested water and to excrete small amounts of urine. Sodium bicarbonate is usually used for alkalinization during sulfonamide therapy, but recent investigations have indicated that sodium retention is of "primary significance" in the development of cardiac edema and congestive heart failure, and that in cases of cardiac decompensation a negative sodium balance should be maintained. In cases of pneumonia with associated cardiac decompensation, the use of sodium bicarbonate as an alkalinizing agent with sulfonamide therapy, therefore, appears to be undesirable. Potassium bicarbonate was found to be well tolerated in the dosage required. Of 16 patients with pneumonia and severe cardiac impairment treated with sulfadiazine, 9 were given potassium bicarbonate as an alkalinizing agent and 7 were given sodium bicarbonate. In all cases the dosage of sulfadiazine was the same, 4 gm. as an initial dose followed by 1 gm. every four hours. With the initial dose 8 gm. of sodium or potassium bicarbonate was given, with each subsequent dose, 2 gm. In all other respects the treatment of the two groups was identical. It was found that the patients given potassium bicarbonate were able to ingest somewhat more fluid than those given sodium bicarbonate, and that they excreted almost twice as much urine, and eliminated over 250 cc. more of retained fluid daily. This facilitates the establishment of cardiac compensation. Patients given potassium bicarbonate were carefully observed, and no evidence of any untoward effect was found. Since this series of patients was treated, the authors give potassium bicarbonate to all patients with cardiac decompensation of Grade III or IV (American Heart Association classification) who are given sulfonamide therapy; and its use is being extended to milder cases of cardiac disease as a prophylactic measure against cardiac decompensation. A dosage of 10 gm. with the initial dose of sulfonamide and 2.5 gm. every four hours thereafter, until twenty-four hours after discontinuance of sulfonamide therapy, is now employed. Potassium bicarbonate is not used, however, for patients with severe renal impairment or evidence of adrenocortical insufficiency.

COMMENT

This sounds like good therapy. In the old, however, one must be cautious, since there is often renal impairment. This applies to both potassium bicarbonate and to sulfonamides.

M.W.T.

Diuretic Efficacy of Oral Administration Of a Preparation of Mersalyl and Theophylline in Cases of Congestive Heart Failure

H. M. CARRYER and H. L. SMITH (*Medical Clinics of North America*, July 1944:911) report the use of a preparation of mersalyl and theophylline (salyrgan-theophylline) as a diuretic in cases of congestive heart failure. For oral administration enteric coated tablets each

containing 0.08 gm. mersalyl and 0.04 gm. theophylline were employed. The usual dose was 5 tablets in the morning, but "on two occasions," doses of 2 tablets each were given three times a day. Oral administration of salyrgan-theophylline has been employed in 22 cases of congestive heart failure, including 7 cases of hypertensive heart disease, 8 cases of arteriosclerotic heart disease, 2 cases of arteriosclerotic and hypertensive heart disease, 4 cases of rheumatic heart disease and one case of heart disease associated with emphysema. Salyrgan-theophylline solution was also given intravenously in these cases, usually alternately with oral administration; in 19 cases the drug was first given intravenously. The solution used for intravenous administration contained 0.1 gm. of mersalyl and 0.05 gm. of theophylline per cc.; the usual dosage was 2 cc. of this solution, occasionally only 1 cc. The maximal diuretic effect of the drug was obtained within the first twenty-four hours with either method of administration. In younger patients with adequate renal function and severe edema of recent onset, the oral administration of salyrgan-theophylline had almost as effective a diuretic action as the intravenous administration. In older patients with less renal reserve and heart failure of longer duration, the diuretic effect with oral administration of the drug was definitely less than with intravenous administration. There were no untoward reactions to the intravenous administration of salyrgan-theophylline and very few toxic effects from oral administration, none of a "serious nature." Salyrgan-theophylline, the authors conclude, is "an adjunct" in the treatment of congestive heart failure, especially when a mercurial diuretic cannot be employed intravenously, but so far no drug has been found which acts as effectively as a diuretic in these cases when given orally as when given intravenously.

COMMENT

This preparation should be useful, especially following relief by intravenous or intramuscular injections; that is, to follow the injections later. In older persons, mersalyl should never be given intravenously but it is safe intramuscularly. Ammonium chloride should precede the treatment. Some of my older patients with congestive heart failure have had an intramuscular injection of mersalyl-theophylline every week for three or four years and I am sure that this is a life-saving measure. Perhaps these patients can take oral medication after they have obtained some relief, but the intramuscular route is so satisfactory that I doubt if it is necessary to use any other method except as a supplement.

M.W.T.

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Hemolytic Anemia

M. F. BEARD (*Southern Medical Journal*, 37:448, Aug. 1944) classifies hemolytic anemia as congenital or acquired. In the acute cases of hemolytic anemia the increasing jaundice and decreasing red cell count are clear indications of the hemolytic process. But in chronic cases, the evidences of hemolysis are not so "dramatic"; and the correct diagnosis may not be made promptly. The best indications of hemoylsis in such cases are a normocytic or microcytic, normochromic anemia, increased reticulocytes, elevated icterus index and enlarged spleen. These

findings do not establish the diagnosis of hemolytic anemia but "focus" the attention on hemolysis as a possible cause of the disease. In the treatment of hemolytic anemia, it has been pointed out by various observers that blood transfusions frequently initiate a hemolytic crisis in acute congenital hemolytic anemia, and are, therefore, not indicated in this condition. On the basis of clinical experience, the author and his associates are of the opinion that this rule can be extended to the chronic congenital cases and to the cases of acquired hemolytic anemia. Increased hemolysis does not occur in every case of hemolytic anemia receiving whole blood, but it occurs with sufficient frequency to warrant discontinuing the use of whole blood transfusions in this type of anemia. The author has recently used blood plasma in the treatment of 8 cases of hemolytic anemia. As a rule 250 cc. of plasma were given daily at first, and the amount increased or decreased according to increase in total red cell count and decrease in reticulocytes. The results in the cases treated were "uniformly good." The patient's general condition improved, the red cell count increased, while the icterus and reticulocyte count decreased until "hemopoietic equilibrium" was reached. In cases that fail to respond promptly to plasma, the author considers that splenectomy is indicated.

COMMENT

This certainly should encourage further investigation on the use of plasma for hemolytic anemia. ***M.W.T.***

Canavalin, a New Enzymatic Bactericidal Agent

D. L. FARLEY (*Surgery, Gynecology and Obstetrics*, 79:83, July 1944) reports experimental and clinical studies of canavalin, which is a mixture of an enzyme and a co-enzyme solution, separately extracted and mixed. In the first experiments relating to the development of this product, it was found that the blood serum of animals and man contained a substance that inhibited hemolysis of red blood cells, and that the amount of this substance in the blood could be increased by the administration of thiamin chloride. It was finally found possible to isolate this substance from the blood and also from thiamin and to prepare it *in vitro*. The physical characteristics of the substance indicated that it is a co-enzyme. In studying various enzymes, it was found that this substance acted against polysaccharides in the presence of an extract of jack bean meal. When emulsions of living bacteria, especially those of the pneumococcus group, were substituted for the polysaccharides as substrates it was found that the bacteria were killed. Following these experiments, canavalin was prepared, by using an extract of jack bean (*Canavalia ensiformis*—8) as the enzyme portion and preparing the co-enzyme portion by extracting a mixture of cellular tissue and thiamin. In vitro experiments with canavalin showed that it renders both gram-positive and gram-negative organisms "incapable of growth." Its bactericidal action was found to be due to oxidation. Tests with other bactericidal agents—penicillin and sulfadiazine—showed no evidence of oxidation. However, while sulfadiazine showed no evidence of oxidation when used alone with polysaccharides, the addition of even small amounts of sulfadiazine caused definite stimulation of canavalin oxidation. In tests on animals and normal human subjects it was found that the injection of canavalin, even in large dosage, had no toxic effect. Canavalin has been employed in 13 cases of lobar pneumonia; in some of these cases sulfadiazine had been given without satisfactory response. In all cases there was a prompt and definite drop in temperature. All but one of these patients recovered; the one death was due to cardiac failure after the patient had shown definite improvement under canavalin therapy. Two of these patients who recovered had septicemia, and one of these two also had empyema, which cleared up entirely under canavalin therapy. A third patient, with a *Staphylococcus albus* infection, who showed no response to sulfadiazine and was very ill when canavalin was given, made a prompt recovery. In the more severe cases canavalin was given by slow intravenous drip.

A Suggested Therapeutic Procedure For the Treatment of Empyema By the Closed Method

E. E. CARPENTER (*Journal-Lancet*, 64:278, Aug. 1944) describes a method for the closed treatment of empyema, employing a wetting agent "Tergitol B." This agent was employed for liquefying the heavy purulent exudate and "the heavy layer of pus-laden fibrin with its myriad bacteria that forms on the parietal and visceral pleura" in chronic empyema. The wetting agent employed is an azochloramide-tetradecyl solution; sodium sulfadiazine is "incorporated" in this solution (80 grains in 100 to 200 cc. of the solution). For washing out the empyema cavity and instillation of the solution by the closed method a 17-gauge needle perforated on the side with a dental drill is employed. Pus is removed from the empyema cavity as completely as possible; if the pus is thick, enough is withdrawn to permit the instillation of 50 to 100 cc. of the solution. By the next day the pus can usually be completely removed; the empyema cavity is then thoroughly washed out with saline, and 100 to 300 cc. of the sodium sulfadiazine azochloramide-tetradecyl solution instilled, and allowed to remain. This procedure is repeated two to three times a week, according to the reaction of the patient and the results obtained. In tuberculous empyema, diazone instead of sodium sulfadiazine has been used. All the usual precautions employed with sulfonamide therapy must be carried out when sulfadiazine is used. X-ray and fluoroscopic control should be employed, and intrathoracic pressures checked. In the cases treated the results have been better than with any other method. There was a prompt drop in temperature, and apparent rapid dissolution of "the puro-fibrinous layer" on the pleura. One illustrative case is reported. The author presents this preliminary report "rather hesitantly," but with the hope that the method may be tried by others in a larger number of cases.

COMMENT

This contribution by Dr. Carpenter is interesting and warrants fair trial. The results reported are certainly satisfactory. Surgeons are familiar with the closed method, its indications, advantages and limitations. Under ordinary circumstances, associated with irrigation, employing Dakin solution, azochloramid, etc., patients do well. However, certain other cases prove refractory to this type of treatmen. Heavy, thick pus defies efforts at evacuation. The "purofibrinous" layer transforms the otherwise thin, pliable pleura lining the sac and covering the lung into a tough, thick, binding investment. The suggestion that "Tergitol B" resolves this difficulty is good news indeed and will encourage many surgeons to adopt this technic in their troublesome empyema cases, particularly when chronic.

T.M.B.

The Use of Thiouracil in the Preparation Of Patients With Hyperthyroidism For Thyroidectomy

F. D. MOORE and associates at the Massachusetts General Hospital (*Annals of Surgery*, 120:152, Aug. 1944) report the use of thiouracil for preoperative preparation of patients for thyroidectomy in 52 cases of thyrotoxicosis. Of these 52 patients, 34 have come to operation and have been followed up long enough to form the basis of this report. Eight of these patients had previously been treated with iodine, and one of these 8 continued to take potassium iodide during the time that thiouracil was given. In 26 cases thiouracil was the only "specific drug therapy" employed. A comparison is made with 35 thyrotoxic patients who were prepared for operation with iodine. In all the 34 patients treated with thiouracil the metabolic rate was reduced more rapidly and to lower levels than with iodine preparation. In those not previously treated with iodine the fall in metabolic rate was more rapid than in those who had received iodine. These patients also showed a satisfactory clinical response in decreased nervousness and tremor and increased strength. The thyroid gland did not become firmer, as is usual with iodine therapy; bruit and thrill developed over the thyroid in some cases; in some a pre-existing bruit became louder. The condition of the patients prepared with thiouracil was satisfactory throughout operation in regard to pulse and blood pressure and the postoperative course was "smoother" than in the patients prepared with iodine. The thyroid glands removed after thiouracil treatment showed hypertrophy or hyperplasia with diminished or absent colloid; this is in contrast to the involution of the gland observed after iodine therapy. In some cases the hyperplasia was accompanied by vascularity and

friability which made the surgical removal of the gland more difficult. Thiouracil caused toxic reactions in a few cases similar to those observed with the less toxic sulfonamides, but none of these toxic manifestations complicated the operation. The authors conclude that thiouracil is "an improvement over iodine" for the preoperative preparation for thyroidectomy, chiefly because of its effect on the metabolic rate. It is not, however, "the ideal drug for this purpose" because it increases the histologic abnormality of the thyroid, affects only the production of the hormone and "not the underlying etiology of hyperthyroidism"; may render surgery more difficult; and may have toxic effects.

COMMENT

This report on the use of thiouracil in the preparation of patients for thyroidectomy in 52 cases of thyrotoxicosis is interesting and informative. The authors admit that thiouracil is an improvement over iodine, but hasten to state and to explain why it is not the ideal drug for this purpose. The drug is rapidly absorbed from the gastro-intestinal tract. It is distributed throughout all tissues and fluids of the body. The largest concentration seems to be in the pituitary gland, thyroid, adrenals and bone marrow. It causes a decrease in the formation of the thyroid hormone. This decreases the amount of thyroxin in the thyroid gland and in the blood stream. A decrease in the basal metabolism rate results, thyrotoxicosis disappears, but the production of thyrotropic hormone increases and this stimulates the thyroid to hyperplasia. However, the amount of colloid decreases markedly and this permits decrease in the size of the thyroid gland. This drug is receiving intensive investigation and study. An increasing number of reports are now available, and it will not be long before its effects will have been properly evaluataed.

T.M.B.

Early Ambulation Following Section Of the Anterior Abdominal Wall

H. NELSON (*Archives of Surgery*, 49:1, July 1944) reports 426 abdominal operations on 423 patients following which the patients were out of bed and walking within seventy-two hours after operation. In 258 cases, the patients were walking within twenty-four hours; in 86 cases within forty-eight hours, and in the remainder within seventy-two hours. In carrying out this regimen of early ambulation, the bed is "sharply tilted" to elevate the head as soon as the patient has fully recovered from the anesthesia. After this position has been maintained "for a time," the bed is leveled, and the patient sits up on the side of the bed, and is instructed to breathe deeply and to cough. When he lies down the head of the bed is again elevated. After a rest period, the patient is assisted to stand and to walk to the bathroom, where the bladder is "practically always" emptied without difficulty. The rapidity with which these various procedures are carried out varies with the individual case. After the "initial ambulation" patients are allowed to get up as often as they wish, to go to the bathroom, to get a drink or to sit on the sun porch. The initial ambulation may cause pain, but following this patients rarely complain of any discomfort. Patients who are "oversensitive" to pain or "unduly apprehensive" are made to practice sitting up on the edge of the bed with intervals of rest until they are strong enough and willing to attempt walking. Early ambulation is contraindicated by the following conditions: Failure to observe the tenets of Halsted as to the closure of wounds; the use of suture materials other than wire or cotton; the presence of vitamin deficiencies or hypoproteinemia; potential or actual complications of the wound, such as gross contamination, infection, hemorrhage or dehiscence; conditions for which absolute rest in bed is indicated (shock, hemorrhage, etc.); extreme debility; and the second stage of a thoracolumbar sympathectomy. In some ways early ambulation reduces the amount of nursing care necessary, but nursing supervision must be "adequate and intelligent" to insure carrying out of instructions by the patients and avoidance of overexertion. The majority of the operations in the series reported were appendectomies (317 operations); there were also 79 operations for hernia; a transverse incision was used in 286 of the 426 operations. There was one death in this series, due to cerebral thrombosis, "obviously not related to early rising." Partial disruption of the wound occurred in 3 cases, but in 2 of these the wound had been closed with catgut and early ambulation had not been authorized by the surgeon. There were 2 incisional hernias, both small and one recurrent incisional hernia, where repair had not been adequate. Other postoperative complications included: 8 cases of wound infection; one stitch abscess; 2 cases of pneu-

monitis (one in a case of carcinoma of the esophagus with mediastinal extension); one case each of atelectasis, edema of the scrotum, edema of the spermatic cord and abortion (possibly self-induced). The author notes the absence of such complications as embolism, phlebitis, peritonitis and infection of the urinary tract, with early ambulation. The incidence of postoperative nausea, vomiting and abdominal distention was low; the psychological effect of early rising was favorable; and the period of convalescence and of the postoperative hospital stay was shortened in this series.

COMMENT

This paper is one of many appearing in current medical literature calling attention to the advisability of getting our patients out of bed almost at once following laporatomy. The reported results seem to justify the contention of the authors that in consequence of adopting this program patients convalesce more rapidly and without complication. Surgeons have become increasingly aware of the beneficial effects of early mobilization. Many plans have been advanced to stimulate respiratory and circulatory activity, mostly through active muscular exercise and effort. Frequent change of position, exercises against resistance and deliberate attempts instituted to deepen respirations, each and all have proven satisfactory. Now we are urged to go a bit further and get our patients up and out of bed at the earliest possible moment. This seemingly astounding innovation in early postoperative care has considerable merit. It has aroused active and interested attention and no doubt will be taken up and put into actual practice more generally as time goes on. Certainly the advances made in anesthesia, surgical technic, estimation of surgical risk and last but not least the development of intelligent pre- and postoperative care have prepared the groundwork so that the surgeon adopting this new idea can face a departure from tradition or orthodoxy without much fear or trepidation. Surely this is not a surgical stunt. Its purpose is not to get the patient out of the hospial in a few days, nor should it be adopted in an effort to jump the gun on our colleagues. Its sole purpose is to avoid disabling and threatening complications, to promote a smooth, effective and more rapid convalescence. It is solely in the interest of the patient. It should not be adopted as routine, but rather adjusted to the needs and requirements of the individual patient. Proper professional supervision should be arranged. Asepsis and superlative surgical technic are prerequisites. The advantage of transverse and muscle-splitting incisions has been emphasized. The use of silk, cotton and metal as suture material has been over-emphasized. Under similar conditions catgut selected and used with the surgical nicety attending the silk technic, etc., will be equally successful. Personal experience leaves me with the conviction that we have something in this departure. Patients are happied, they get a psychological lift, nursing problems are simplified, pulmonary complications, thrombophlebitis and embolism are reduced to a minimum. Hurried adoption of this plan as just another routine without realizing the thoughtful planning and personal supervision that is essential for real success will bring this very valuable contribution into disrepute. T.M.B.

Red Blood Cell Paste in Treatment of Ulcers and Chronically Infected Wounds

C. K. MURRAY and C. M. SHAAR (*Journal of the American Medical Association*, 125:779, July 15, 1944) report the use of red cell paste in the treatment of wounds, burns and chronic ulcers. The red cells are "an important by-product" of plasma production. For the preparation of the paste employed the red cells are aspirated from the bottom of "the red blood cell pack." Powdered tragacanth (2.3 gm.) is dusted in the surface of 1: 1,000 hexylresorcinol solution (75 cc.) in a sterile glass beaker; a sterile covering is applied and the mixture kept until a gelatinous mass forms; this is sterilized in a water bath at 100°C; and 25 gm. mixed with 250 cc. of the red cell concentrate to form a paste. This paste has been found to contain 8 to 10 million erythrocytes and 2 to 3 thousand leukocytes per cc. Superficial wounds and burns are treated by applying a thin film of the paste; in deep granulating wounds and ulcers the paste is applied more freely; a sterile dry dressing is used over the paste. Of 70 open wounds treated with this red cell paste or powdered red blood cells (earlier cases), all but 4 healed well. The red cell paste was successfully used in 15 cases of indolent ulcer that had not responded to other methods of treatment; 9 out of 10 varicose ulcers and 2 ischemic ulcers healed under treatment with the paste; one decubitus ulcer healed completely, another showed definite improvement but a third failed to respond to the treatment. Several other cases of infected burns and extensive granulating wounds healed well under treatment with the red cell paste. The best results were obtained in wounds in which slow healing resulted from local circulatory impairment.

COMMENT

This paper calls attention to the beneficial effects and favorable results obtained in the use of red blood cell paste in the treatment of ulcers and chronically infected wounds. This suggested treatment will be eagerly taken up and utilized by a harassed surgeon, baffled by the obstinancy of certain wounds and ulcers to heal in spite of many and varied therapeutic routines. The details of preparation of the cell paste are set forth. The method is rational and when the paste is available a trial is justified by the evidence presented by the authors. However, topical applications in such cases constitute just one approach. Many times the choice of local medicament is not nearly so important in securing healing as putting into effect a remedial program aimed to correct any and varied deficiencies brought out by thorough study and analysis of the individual case. T.M.B.

UROLOGY

Management of Urethro-Rectal Fistula

B. C. CORBUS, Jr. and B. C. CORBUS, Sr., (*Journal of Urology*, 52:61, July 1944) note that with the increasing use of the perineal approach in urologic surgery, "the occasional or even rare occurrence" of urethro-rectal fistula is a troublesome complication. Penetration of the rectum in perineal surgery is most often due to direct trauma in separating the rectum from the urethra in gaining access to the posterior fascia of Demonvilliers. Suppuration rarely causes rectal perforation. Circulatory deficiency may result from "undue" thinning of the rectal serosa in the course of surgical exposure and cause perforation with fistula formation. Urethro-rectal fistula has been successfully repaired surgically in a number of cases. In 1932 E. G. Davis reported obtaining spontaneous closure of urethro-rectal fistula after prostatectomy in 3 cases, by the use of combined suprapubic and urethral suction drainage. The author reports a case in which a urethro-rectal fistula developed after a perineal prostatectomy. At operation during the blunt dissection of the rectum directly posterior to the central tendon, a thinning of rectal mucosa was observed, but no perforation was found. But perforation occurred on the seventh post-operative day. A suprapubic cystotomy was done immediately and a 30 cc. Foley catheter substituted for the plain urethral catheter. With the aid of the Wangensteen decompression apparatus combined suprapubic and urethral suction drainage was instituted, as suggested by Davis. Sulfaguanidine was given in full doses to sterilize the "fecal current." The perineal wound was irrigated twice daily, and gauze packing impregnated with balsam and 2 per cent silver nitrate (to stimulate granulation) inserted. The patient was discharged from the hospital in five weeks with no evidence of urethro-rectal fistula, and with both the perineal and suprapubic wounds closed. This is the fourth case successfully treated by the conservative method of combined suprapubic and urethral suction drainage.

COMMENT

This case illustrates the three bases on which rest all fistula treatment: (1) dryness, secured by suction drainage, (2) cleanliness, provided for by intestinal sulfaguanidine, and (3) antiseptic and stimulating dressings of the sinus and wound. Time was when any fistula involving the rectum was a bete noir *in convalescence.* V.C.P.

Nephrolithotomy for Recurrent Branching Calculi

Henry Bugbee (*Journal of Urology*, 52:99, Aug. 1944) describes an operation for removal of a recurrent branching calculus. The incision for this operation is made posterior to and below the scar of the primary operation. Because of the absence of scar tissue the incision is readily carried through the abdominal muscles and lumbodorsalis fascia down to the perirenal fascia (Gerota's capsule). The upper flap is freed to the level of the last rib, the scar tissue from the former operation being "elevated" with this flap. In the 2 cases in which this operation was done, the kidney was high up, under the last rib. This is usually true in cases of this type as the kidney is usually firmly adherent, especially if previously drained by nephrostomy. In such cases, the twelfth rib is resected so that the calculus in the pelvis and lower calyx can be palpated through the perirenal fascia and the "thinned out" kidney parenchyma. One incision is then made through the

perineal fascia and the kidney parenchyma on a line approximately just posterior to the convex border of the kidney. This incision is deepened until the calculus is freely exposed and can be removed. A drainage tube is placed in the lower calyx. The kidney incision is closed with mattress sutures, which are passed through the perirenal fascia as well as the kidney tissue on each side of the incision. The fascia prevents the sutures tearing through the renal parenchyma when traction is applied for tying the sutures, thus controlling bleeding. The fibrous tissue in the abdominal wall and the scar resulting from the first operation are excised and the abdominal wound closed over a drainage tube.

In the 2 cases reported in which this technique was used, the calculus was easily removed through the incision described; there was no postoperative bleeding; the drainage tube was removed in seven to ten days; and the wound healed completely in two weeks. This method of utilizing the renal fascia in placing the sutures for closing the kidney incision has also been employed in a primary operation for removal of a large branching calculus. In this case the renal pedicle was compressed while the incision was made through the parenchyma, and this pressure was maintained until the sutures were placed. There was no postoperative bleeding and the wound healed rapidly. The method of making one incision through perirenal fascia and the kidney can be used only when the kidney tissue is "thinned out" and the calculus easily palpable, as in large recurrent calculi. The inclusion of the fascia, however, in placing the sutures for closing the kidney incision may be used in many cases for control of postoperative bleeding.

COMMENT

The distinctive point in this report is the approach to the kidney through the normal abdominal wall. Anyone who has tried to do a secondary operation on the kidney will remember its extreme difficulties and appreciate the skill of the approach through more or less normal layers below the site of the original operation. *V.C.P.*

Malaria as a Complication in Genito-urinary Tract Disease

A. J. FOLSOM and H. A. O'BRIEN (*Journal of Urology*, 51:646, June 1944)

report 4 cases of urinary tract disease in which malaria occurred at some stage of the disease and complicated the clinical picture. In 2 of these cases the malaria was so severe that it might have been fatal if it had not been recognized and treated. In the other 2 cases the malarial infection was of a milder type and it was recognized earlier; yet in these cases it added "a serious load" to that of the genito-urinary disease. Malarial parasites were not demonstrated in the blood in any of these cases. The diagnosis of malaria was based on the presence of fever (not explained by the genito-urinary condition), anemia, leukopenia, and enlargement of the spleen, and was confirmed by the prompt response to quinine therapy. The authors report these cases to call attention to the fact that malaria may occur as a serious postoperative complication in disease of the genito-urinary tract. This is of especial importance at this time because of the high incidence of malaria in some of the overseas armies, and the fact that many soldiers returning to this country may harbor malarial infection in its latent form. It is well recognized that such latent malaria may become reactivated during periods of lowered general resistance such as the postoperative period. The authors note also that malaria already has an important influence in the clinical experience of urologists in districts where malaria is prevalent, as in the South. General practitioners may treat patients for malaria for weeks, when in reality some type of urinary tract infection is present. On the other hand, urologists must not overlook the fact that malaria may complicate some genito-urinary disease, and must not be so concerned with the correction of the genito-urinary disorder that they fail to diagnose and treat the malaria.

COMMENT

This report is a kind of balance scales. In one pan is malaria and in the other urological infection. There is no doubt that each infection bears directly upon the other so as to require great watchfulness. The malaria as a systemic infection lowers general health and general resistance greatly and contributes to the ill effects of the urological invasion. One may ask whether or not some of these severe malarial cases, although duly recovered, may have a condition in which quinine will always be of benefit and an adjuvant to other treatment. Comparisons are not only dangerous but also misleading. Nevertheless such a con-

dition may not be unlike that of the syphilitic in whom antisyphilitic medication should always be added to other medication and is usually found of great benefit. *V.C.P.*

The Relationship of Hormones To Testicular Tumors

G. H. TWOMBLY (*Surgery*, 16:181, Aug. 1944) finds from a review of the literature that teratoma testis can be produced in the fowl by the injection of zinc or copper salts only when the testis is stimulated by the animals' own hormone (in the spring of the year) or by the injection of anterior pituitary hormone. Leydig cell tumors of the testis can be produced in mice by injection of estrogens. This type of tumor is very rare in man. In the one case seen by the author, the nature of the tumor was not recognized until after it had been removed, and no hormone assays were made; the patient, an adult, showed no sexual abnormalities. Certain clinical observations in regard to teratoma testis suggest an endocrine etiology. This tumor occurs more frequently in men with cryptorchidism than in the general male population. The incidence of cryptorchidism, according to Army records, is 0.23 per cent. In 7000 cases of teratoma testis reported in the literature 11 per cent occurred in cryptorchids; in the author's series of 203 cases of teratoma testis, 27, or 13.3 per cent, occurred in men with cryptorchidism. Not all of the tumors in cases of cryptorchidism arise in the undescended testicle. In the author's series of 27 cases, the tumor occurred in the normal testicle in 6 cases. Unlike other forms of cancer, teratoma testis occurs during the active sex life of the patient, with the highest incidence in the age period of 35 to 39 years. In hormone assays on 65 patients with "active" teratoma testis at the time of at least one of the tests, 38 were found to show chorionic gonatropin. The tumor in 10 of these cases was reported by the pathologist to be embryonal adenocarcinoma and in 7 as chorio-epithelioma; in 9 as embryonal carcinoma or embryonal carcinoma with lymphoid stroma (seminoma), and in 3 as showing mixtures of seminoma and embryonal carcinoma. Follicle-stimulating hormone (menopausal or castrate type) only was demonstrated in 18 cases. These 18 cases include 7 of seminoma, 2 of chorioepithelioma, one a mixture of seminoma and chorio-epithelioma. There was no case of pure embryonal adenocarcinoma in this group. From these findings the authors conclude that the type of testicular tumor cannot be definitely determined from the type of gonadotropic hormone found in the urine, but the chorionic type of hormone is more typical of embryonal adenocarcinoma or chorio-epithelioma. The follicle-stimulating hormone is more typical of seminoma. The demonstration of chorionic gonadotropin in the urine indicates that the tumor is radioresistant and that the prognosis is poor. Of the author's 38 patients showing chorionic gonadotropin in the urine, 32 have died; 4 are living with metastases and only 2 are "apparently cured." The possibility of developing some form of hormone therapy for teratome testis is suggested. The author has used estrogen in 2 cases without any "clear-cut success" but the treatment was not continued for a sufficiently long period.

COMMENT

We are certainly progressing in our knowledge of hormones. This study bids fair to indicate not only a field of diagnosis in these troublesome tumors of midlife, but also a sphere of treatment if the application is begun sufficiently early and persisted in for a sufficiently long time. One of the authorities in endocrinology states that none of the various products used restores the affected gland to normal function. Hence, the product must be continued indefinitely as the artificial normal secretion. Following the same argument treatment of testicular tumors with hormones is not a passing event but a long-continued siege as of a formidable fortress. *V.C.P.*

NEUROLOGY

A Year's Experience With Electro-encephalography

On the basis of a year's experience with electro-encephalography at a Veterans' Administration Facility, W. J. Turner and C. R. Roberts (*Medical Bulletin of the Veterans' Administration*, 20:239, Jan. 1944) conclude that electro-encephalography requires special training and experience. It should not, however, be restricted to research, but should be employed at

every neuropsychiatric hospital as an aid in diagnosis. In the study of 127 patients with dementia precox, 177 satisfactory encephalograms were obtained; 4 per cent of these patients had "grossly abnormal" records, and 4.7 per cent "mildly abnormal" records. From their study of these cases, the authors conclude that while encephalography is not of special value in the study of true dementia precox, encephalographic study of atypical cases may show definite organic brain disease; in such cases the dementia precox is more apt to be the catatonic than the paranoid type. In cases of organic brain disease without convulsions, encephalography was found to be of definite value in determining the operability of certain cases. In 27 cases of idiopathic epilepsy, only 16 showed definitely abnormal encephalograms between seizures, and in these 16 cases no "specific pattern" was demonstrated except at the time of a seizure. The encephalogram has, however, proved of definite value in differentiating the "hysterical fit" from a true epileptic seizure. It is evident that care must be exercised in the interpretation of encephalographic records, and the limitations of the method must be recognized if its true value is to be appreciated.

Prolonged Disturbances of Consciousness Following Head Injury

B. E. MOORE and J. RUESCH (*New England Journal of Medicine*, 230:445 Apr. 13, 1944) present a study of 39 patients who showed disturbances of consciousness for more than seventy-two hours after injury to the head. Such disturbances included coma, semicoma, confusion, delirium, stupor, drowsiness and dysphagia. These 39 patients represent approximately 8 per cent of all the cases of head injury admitted to the Boston City Hospital in a six-month period. The sex ratio (31 males to 8 females) and mean age of this group were similar to those of the entire series of head injuries. The electro-encephalographic findings were abnormal in 93 per cent of this group, bloody spinal fluid was present in 90 per cent, and spinal fluid pressure was elevated in 74 per cent. Babinski's sign was positive in 67 per cent, and the skull was fractured in 65 per cent. These findings are "presumptive evidence" of severe brain damage in these patients in whom prolonged disturbances of consciousness resulted from head injury. Five of the patients in this group died in the hospital, all having sustained severe injury to the brain; subdural hemorrhage had occurred in 4 of these patients. Important changes in "vital signs," respiration, pulse and temperature, occurred in half the cases but seemed to be independent of the duration of mental confusion. In the process of recovery, the respirations became normal first, then the temperature and last the pulse. On the average, the ability to speak was regained by the first day. The first response to simple psychological tests was obtained during the second week, followed by correct orientation in place, situation and time (in the order named). The duration of drowsiness and restlessness varied, and was not directly related to the time of recovery of intellectual function. At the end of six months gross intellectual defect persisted in 31 per cent of these patients; in every case of persisting intellectual defect, the duration of the post-traumatic confusion was longer than nineteen days. The duration of disorientation after a head injury, therefore, has been found to be one of the "most reliable and easily obtainable criteria" of the seriousness of mental prognosis.

Relation of Narcolepsy to the Epilepsies

ROBERT COHN and B. A. CRUVANT (*Archives of Neurology*, 51:163, Feb. 1944) report a study of 10 cases of narcolepsy, including encephalograms. In all these cases the disorder manifested itself as "paroxysmal, diurnal, entirely inappropriate and uncontrollable sleep." In 5 of these cases cataleptic muscular phenomena were induced by effective stimuli. In all these cases there was a family history of a sibling or a first cousin with the same disorder; in 2 cases one sibling was also an epileptic. In one case there was a history of a convulsive disorder in childhood. Three of the patients stuttered, one of them as a prelude to the cataleptic component of the "seizure pattern." The basic encephalograms taken between the intervals of narcoleptic sleep showed abnormal wave forms similar to those obtained in epileptics in 8 of these 10 patients. In 2 cases the epileptic type of response to hyperventilation was noteworthy. During the sleep stage, the encephalograms showed the same pattern as in normal sleep; on this basis the syn-

drome should be termed "hypnolepsy." These findings tend to support Wilson's concept that the narcoleptic (or hypnoleptic) syndrome is one of "the family of epilepsies." On the basis of the electroencephalographic findings, the authors consider that it would be more correct to state the clinical symptoms of both the epilepsies and hypnolepsy "are often associated with objective evidence of disturbances in the physiology of the brain."

Pathologic Features of Herpes Zoster

D. DENNY-BROWN, R. D. ADAMS and P. J. FITZGERALD (*Archives of Neurology*, 51:216, March 1944) report 3 cases of herpes zoster in which death occurred within a few days after the appearance of the typical eruption, and histological examination of the involved ganglia and nerves was made. In 2 of these cases the dorsal root ganglion corresponding to the area of the herpetic eruption showed inflammatory necrosis. In the third case, the eruption involved the right side of the face, head and neck; the same type of necrotizing ganglionitis involved the second cervical ganglion. In all 3 cases there were degeneration of the related motor and sensory roots, severe neuritis, unilateral segmental poliomyelitis and localized leptomeningitis. These findings indicate that the essential pathological changes of herpes zoster involve more than the typical ganglionic lesion and include poliomyelitis and motor neuritis. In the third case reported, although there was auricular and occipital herpes and paralysis of the facial nerve on the right side, the geniculate ganglion showed no pathological changes. These findings indicate that the syndrome described by Ramsay Hunt as due to a herpetic lesion of the geniculate ganglion, i.e., auricular herpes with paralysis of the facial nerve, may occur without any lesion of this ganglion, and it may be due to the "concurrent involvement" of two or more cranial nerves.

Plasma Clot Suture of Nerves

I. M. TARLOV (*Surgery*, 15:257, Feb. 1944) describes and illustrates the method of plasma clot suture of nerves recently employed. Tantalum wire (0.0025 to 0.003 in. in diameter) is employed for tension sutures to bring the nerve ends together while the plasma is applied. These tension sutures are placed "well back from" the primary suture line. While silk may be used for the tension sutures, it is more liable to break, and causes greater tissue reaction than the tantalum wire. The tension sutures must be placed and tied so as to approximate the nerve ends closely without compressing them. Molds of different sizes for large or small nerves have been designed for applying the plasma to the nerve ends and holding it in position until it clots firmly. This usually does not take more than ten minutes. Unmodified plasma was employed at first, but it has been found that heparinized plasma coagulated by means of protamine sulfate is equally effective. The heparinized plasma and protamine sulfate are mixed just before they are placed in the mold. This method has been used chiefly in experimental animals. Autologous plasma clot suture of nerves has been used, however, in 5 human patients. In 2 of these sufficient time has elapsed since the operation to permit some evaluation of the results. One of the patients was operated on before the tantulum-wire and plasma mold method had been developed. In this case the nerve ends were held together with jeweler's forceps, and nerve ends were depressed into the neighboring tissues to form a trough in which the plasma could collect. In this case the spinal accessory nerve was sutured one hour after it had been severed at operation; functional recovery of the sternocleidomastoid muscle began two months after operation and was complete in five and a half months. In the second patient the ulnar nerve was sutured at the level of the wrist fifteen months after it had been severed, by the tantalum-wire plasma mold method; eighteen weeks after operation both sensation and motion were returning to the fourth and fifth fingers. The results of the plasma clot suture of nerves in both experimental animals and human cases are sufficiently "encouraging," in the author's opinion, to justify further use of this method clinically.

Medical BOOK NEWS

HENRI LOUIS ROGER
1809~1891

All books for review and communications concerning Book News should be addressed to the Editor of this department, 1313 Bedford Avenue, Brooklyn, 16, N. Y.

Classical Quotations

• A murmur in a suckling infant will be most often the result of an anomaly of the central circulation rather than of a disease.

RENRI LOUIS ROGER

Recherches cliniques sur la communication congenitale des deux coeurs, par inocclusion du septum interventriculaire. *Bulletin de l'Academie de Medecine*, 2me serie, Tome VIII, 1879, pp. 1074-1094.

Treatment of Wounds

Technique in Trauma, Planned Timing in the Treatment of Wounds Including Burns. From The Montreal General Hospital and McGill University. By Fraser B. Gurd, M.D., and F. Douglas Ackman, M.D. Philadelphia, J. B. Lippincott Co., [c. 1944]. 68 pages, illustrated. 8vo. Cloth, $2.00.

THIS is essentially a monograph in three chapters on methods and results from the wards of the Montreal General Hospital and McGill University. The burns were treated by preliminary cleansing, sulphathiazole emulsion and occlusive pressure dressings with infrequent change. With respect to wounds, they recommend treatment by surgical operation, followed by the establishment of "curtain drainage" and plaster encasement. There is an interesting summation or "Commentary" by Ralph R. Fitzgerald, M.D. This is a valuable hospital report on an important and pertinent subject.

JOSEPH RAPHAEL

Hirschfeld on Sex

Sexual Anomalies and Perversions. Physical and Psychological Development and Treatment. A Summary of the Works of the late Professor Magnus Hirschfeld, M.D. New York, Emerson Books, Inc., [c. 1944]. 630 pages. 8vo. Cloth, $4.95.

THIS represents the life work of Hirschfeld, which was planned as a textbook for students, criminologists, judges, probation officers, and educationists. Unfortunately, the author died before completion of the final touches of the book. His students, however, continued the task of finishing the work anonymously.

An outline of the career of the author is given as well as his great humanitarian influence in sexual reform in Europe. He organized congresses and societies for this purpose and attained distinction in the field of psycho-sexual behavior problems.

The younger generation of so-called sexologists of his time recognized him as a leader in the field.

The author's scientific achievement is summarized as follows:

1.—He discovered that the quantity and distribution of the sexual hormones exercise a decisive influence in the development of the entire sexual personality.
2.—He proved that all sexual anomalies are cause by irregularities in development.
3.—He applied the results of the psychoanalytical school to sexual anomalies of physiological origin.

The multiple and varied forms of sexual anomalies and perversions are fully discussed in some six hundred pages of text.

AUGUSTUS HARRIS

Endocrine Disorders

Female Endocrinology, Including Sections on the Male. By Jacob Hoffman, M.D. Philadelphia, W. B. Saunders Company, [c. 1944]. 788 pages, illustrated. 8vo. Cloth, $10.00.

THIS book merits a position as one of the important contributions to our present knowledge of endocrinology. Its

chief virtue lies in the fact that the author has had first hand contact with both the clinical and laboratory phenomena involved.

Although aware of the difficulties in the appraisal of the many divergent opinions in the problems of endocrinology, the reviewer can not wholly agree with many of the author's deductions and conclusions. For instance, in his summary in the chapter "Time of Ovulation and Safe Period" the statement that "ovulation tends to occur at approximately the mid-phase of the cycle" would appear, in the light of present available evidence, somewhat misleading, for it has been more or less established that ovulation does occur from fourteen to sixteen days prior to the next expected menstrual period, irrespective of the length of the cycle involved.

The author should be commended for his conservatism in his recommendations for treatment. The volume is well written, easily understandable, excellently illustrated and authenticated with an extensive bibliography. It is highly recommended as a worthwhile addition to every medical library.

SAMUEL L. SIEGLER

Metastases

Metastases, Medical and Surgical. By Malford W. Thewlis, M.D. Charlotte, N. C., Charlotte Medical Press, [c. 1944]. 230 pages, illustrated. 4to. Cloth, $5.00.

THIS tabulation of medical and surgical metastases, with its running comments of illuminative character, will be of great pathologic and clinical aid to general practitioners, surgeons and roentgenologists engaged in the tracing of such traveling processes as infection, embolism and infarction and the dissemination of neoplasms. Diagnostically, the skilfully organized data are utilizable in working either from source to metastasis or in reverse, so to speak—from metastasis to source. It is a product of extensive research which invokes effectively a technic that suggests the Sherlockian detective's utilization of clues, laboriously marshalled, likely to be missed by the Watsons of the world, thus it is bound better to implement and therefore augment one's clinical insight. The author's commendable efforts yield fascinating shortcuts for the busy clinician.

ARTHUR C. JACOBSON

Infantile Paralysis

The International Bulletin. For Medical Research and Public Hygiene. Editor-in-Chief, W. L. Colze. Vol. A44. Rosenow: Poliomyelitis. (From the Mayo Foundation for Medical Education & Research, University of Minnesota, Rochester.) New York, The International Bulletin. 87 pages, illustrated. 8vo.

THIS bulletin is devoted entirely to a summary of the work carried on by Dr. Edward C. Rosenow of the Mayo Foundation and is entitled "Poliomyelitis, The Relation of Neurotrophic Streptococci to Epidemic and Experimental Poliomyelitis and Poliomyelitis Virus, Diagnostic, Serologic Tests and Serum Treatment."

Rosenow remarks that in his various studies he has granted freely that the virus etiology of poliomyelitis was established and he admitted that he has been unable to produce the typical clinical and pathological picture of the disease in the monkeys by intracerebral inoculation with his poliomyelitis streptococcus. Now, however, he presents evidence that he has actually recovered a filtrable transmissible infectious agent having the properties of natural virus, which he has obtained from the streptococci isolated in his studies of poliomyelitis, as well as from neurotrophic streptococci obtained from sources other than poliomyelitis. With this, in the author's opinion, the proof of causal relationship of his poliomyelitic streptococcus has been fulfilled, including the production of the classical clinical picture of the disease in monkeys.

Dr. Rosenow raises the point that the filtrable and transmissible relatively nonantigenic or virus phase with which the clinical symptoms and lesions can be produced serially in monkeys, has been studied exclusively by the scientific world almost to the exclusion of the highly specific injections and antigenic streptococcal phase. This new viewpoint will, no doubt, receive comment and study.

JOS. C. REGAN

Rheumatic Diseases

Pathology and Therapy of Rheumatic Fever. By Leopold Lichtwitz, M.D. New York, Grune & Stratton, [c. 1944]. 211 pages, illustrated. 8vo. Cloth, $4.75.

THIS small volume of some two hundred pages strives to integrate the various syndromes having a clinical or pathological "rheumatic" component under one basic principle of a sensitization phenomenon involving mesenchymal tissue with an hyperergic or anergic response on

the part of the host. Rheumatic fever accordingly is a defense rather than invasive mechanism and includes in its family such vague entities as dermatomyositis, lupus erythematosus disseminatus, and nephritis.

While this treatise is an "arm-chair" philosophy in that it represents a proposition rather than a "Q.E.D." conclusion, it nevertheless is a product of profound thought linked with extensive clinical observation and based on world literature in this and allied fields. There is an excellent bibliography.

The reviewer is entirely sympathetic with the writer in that for years his rationale of therapy has corresponded with the theories expressed herein—yet without the means of establishing experimental proof of correctness of the concept, save for results obtained in therapy itself.

The work is stimulating and provocative. It is an important milestone on the road to etiology of the "rheumatic state" (in a generic sense).

GEORGE E. ANDERSON

New Edition of Novak's Gynecology

Textbook of Gynecology. By Emil Novak, M.D. Second Edition. Baltimore, The Williams & Wilkins Co., [c. 1944]. 708 pages, illustrated. 8vo. Cloth, $8.00.

THE second edition of this textbook within a period of two years is excellent evidence that it has earned the enthusiastic approval of those for whom it is intended—students and general practitioners. This important subject is well presented by a distinguished and experienced teacher. Details of operative procedures have been omitted. The essentials are all here. Not bulky or formidable, it is easy reading.

CHARLES A. GORDON

Harrow's Biochemistry

Textbook of Biochemistry. By Benjamin Harrow, Ph.D. 3rd Edition. Philadelphia, W. B. Saunders Company, [c. 1943]. 537 pages, illustrated. 8vo. Cloth, $4.00.

IN the field of biochemistry the textbook by Harrow occupies a permanent and familiar place. A new edition is always a welcome event.

The present volume contains considerable new material. Particular attention is directed to the discussions involving nutritional problems such as the enriching of foods, vitamins, carbohydrate metabolism, and the newer work on fluorine and dental caries.

In the field of chemotherapy there is an extensive discussion on the sulfa compounds and even penicillin, gramicidin, and tyrocidin are mentioned, though briefly.

The book is written in the usual lucid style which we have learned to expect and appreciate.

BENJAMIN DAVIDSON

Physical Medicine

A Manual of Physical Therapy. By Richard Kovacs, M.D. 3rd Edition. Revised. Philadelphia, Lea & Febiger, [c. 1944]. 309 pages, illustrated. 8vo. Cloth, $3.25.

IN publishing this little book Dr. Kovacs has presented a most useful and concise guide to modern physical medicine. Based upon a similar text by the same author for the use of nurses, the book has been revised and enlarged to meet the needs of the medical practitioner for a manual of the application of physical measures. The book is surprisingly complete in view of its small size, and includes chapters of all phases of physical medicine. It is modern in its concepts and material, and well deserves the popularity which it is bound to attain.

JEROME WEISS

Food Allergy

Elimination Diets and the Patients Allergies. A Handbook of Allergy. By Albert H. Rowe, M.D. Second Edition, revised. Philadelphia, Lea & Febiger, [c. 1944]. 256 pages. 8vo. Cloth, $3.50.

THE reviewer feels there is no call for this type of book; it is not inclusive enough for the student of allergy, and it is too inclusive for the patient. The brief space given to this subject only permits the high spots to be considered.

The latter part of the book covers diets of the author's own design. Their composition and manner of use are given in detail. The questionnaire for the patient to fill out and the form for a food diary can be found in most standard text-books on the subject.

The book can only be recommended as a primer.

GEO. A. MERRILL

BOOKS RECEIVED *for review are promptly acknowledged in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases, review noted will be promptly published shortly after acknowledgment of receipt has been made in this column.*

Plaster of Paris Technic. By Edwin O. Geckeler, M.D. Baltimore, The Williams & Wilkins Co., [c. 1944]. 220 pages, illustrated. 8vo. Cloth, $3.00.

The Radiology of Bones and Joints. By James F. Brailsford, M.D. Baltimore, The Williams & Wilkins Co., [c. 1944]. 440 pages, illustrated. 8vo. Cloth, $12.00.

Manual of Psychological Medicine. By A. F. Tredgold, M.D. Baltimore, The Williams & Wilkins Co., [c. 1943]. 298 pages. 8vo. Cloth, $5.00.

Operations of General Surgery. By Thomas G. Orr, M.D. Philadelphia, W. B. Saunders Co., [c. 1944]. 723 pages, illustrated. 4to. Cloth, $10.00.

Manual of Military Neuropsychiatry. Edited by Harry C. Solomon, M.D., and Paul I. Yakovlev, M.D., with the collaboration of Lt. Col. Wilfred Bloomberg, M.C., AUS, et al. Philadelphia, W. B. Saunders Co., [c. 1944]. 764 pages, illustrated. 12mo. Cloth, $6.00.

A Textbook of Pathology. Pathologic Anatomy in Its Relation to the Causes, Pathogenesis, and Clinical Manifestatins of Disease. By Robert Allan Moore. Philadelphia, W. B. Saunders Co., [c. 1944]. 1338 pages, illustrated. 8vo. Cloth, $10.00.

Gynecological and Obstetrical Urology. By Houston S. Everett, M.D. Baltimore, The Williams & Wilkins Co., [c. 1944]. 517 pages, illustrated. 8vo. Cloth, $6.00.

Ventures in Science of a Country Surgeon. By Arthur E. Hertzler, M.D. Halstead, Kansas, The Author, [c. 1944]. 304 pages, illustrated. 8vo.

Joseph Lister, Father of Modern Surgery. By Rhoda Truax. Indianapolis, Bobbs-Merrill Co., [c. 1944]. 287 pages, illustrated. 8vo. Cloth, $3.50.

Taber's Dictionary of Gynecology and Obstetrics. By Clarence Wilbur Taber with the Collaboration of Mario A. Castallo, M.D. Philadelphia, F. A. Davis Co., [c. 1944]. Illustrated. 16mo. Cloth, $3.50.

Principles and Practice of Surgery. By W. Wayne Babcock, M.D. With the Collaboration of 37 Members of the Faculty of Temple University. Philadelphia, Lea & Febiger, [c. 1944]. 1,331 pages, illustrated. 4to. Cloth, $12.00.

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